

**CORPORATE GOVERNANCE AND FIRM
PERFORMANCE: A STUDY OF PUBLIC LISTED
COMPANIES IN THE KINGDOM OF SAUDI ARABIA**

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OF SAUDI ARABIA**

By

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**Thesis Submitted to
Othman Yeop Abdullah Graduate School of Business
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ABSTRACT

This thesis examines the relationship between CG mechanisms and firm performance among firms in the Saudi Stock Exchange (Tadawul) for the periods 2007-2011. Two models have been developed using the framework of agency theory, stewardship theory, and resource dependence theory to test this study's hypotheses. Model 1 comprises three categories of determinants. The first category is board of directors' characteristics: board Royal family members, board size, independence, board meetings, board financial knowledge, CEO duality, and board multiple directorships. The second category of determinants is audit committee characteristics: audit committee outside financial expertise, multiple directorships, size, independence, meetings, and financial expertise. The third category is ownership structure: Royal family, non-Royal family, government, and domestic corporate ownership. Model 2, including ownership structure, comprises board of directors' effectiveness score and audit committee effectiveness score. This study utilizes the Weighted Least Squares (WLS) models. The final sample comprises 573 observations. The results showed that Royal family members, board size, and CEO duality are positively associated with firm performance. In contrast, board meetings, board financial knowledge, and board multiple directorship are negatively associated with firm performance, whereas board independence has no association. Audit committee characteristics, outside financial expertise, size, independence, and meetings are negatively associated with firm performance. In contrast, financial expertise is positively associated with firm performance, whereas multiple directorships have no relationship. For both models, ownership structure—Royal family, non-Royal family, government, and domestic corporations—is positively associated with firm performance. Board of directors' effectiveness score and audit committee effectiveness score are positively associated with firm performance. It should be noted that the findings established in this study could be useful to regulators, especially the Ministry of Commerce and Industry (MCI), the Capital Market Authority (CMA), Tadawul, and the Saudi Organization for Certified Public Accounting (SOCPA) to improve CG practices. For companies, this study proposes that they should put more emphasis on enhancing the role and the quality of the board of directors and audit committee members, as they are involved in the decisions that improve firm performance.

Keywords: firm performance, corporate governance, Saudi Arabia

ABSTRAK

Tesis ini mengkaji hubungan antara mekanisma CG dan prestasi firma dalam kalangan firma di Bursa Saham Saudi (Tadawul) bagi tempoh 2007-2011. Dua model telah dibentuk dengan menggunakan kerangka teori agensi, teori pengawasan (*stewardship theory*), dan teori kebergantungan sumber bagi menguji hipotesis kajian. Model 1 terdiri daripada tiga kategori penentu. Kategori pertama ialah ciri-ciri lembaga pengarah: ahli keluarga diraja lembaga, saiz lembaga, kebebasan, mesyuarat lembaga, pengetahuan kewangan lembaga, dualiti CEO, dan pelbagai jawatan pengarah lembaga. Kategori penentu kedua ialah ciri-ciri jawatankuasa audit: kepakaran luar kewangan jawatankuasa audit, pelbagai jawatan pengarah, saiz, kebebasan, mesyuarat, dan kepakaran kewangan. Kategori ketiga ialah struktur pemilikan: keluarga diraja, bukan keluarga diraja, kerajaan, dan pemilikan korporat domestik. Model 2, termasuk struktur pemilikan, terdiri daripada skor keberkesanan lembaga pengarah dan skor keberkesanan jawatankuasa audit. Kajian ini menggunakan model *Weighted Least Squares* (WLS). Sampel akhir terdiri daripada 573 penelitian. Kajian menunjukkan bahawa ahli keluarga diraja, saiz lembaga, dan dualiti CEO berkait secara positif dengan prestasi firma. Sebaliknya, mesyuarat lembaga, pengetahuan kewangan lembaga, dan pelbagai jawatan pengarah lembaga berkait secara negatif dengan prestasi firma manakala kebebasan lembaga tidak mempunyai sebarang hubungan kait. Ciri-ciri jawatankuasa audit, kepakaran kewangan luar, saiz, kebebasan, dan mesyuarat berkait secara negatif dengan prestasi firma. Sebaliknya, kepakaran kewangan berkait secara positif dengan prestasi firma manakala pelbagai jawatan pengarah lembaga tidak mempunyai hubungan kait. Bagi kedua-dua model, struktur pemilikan—keluarga diraja, bukan keluarga diraja, kerajaan, dan korporat domestik—berhubung kait secara positif dengan prestasi firma. Skor keberkesanan lembaga pengarah dan skor keberkesanan jawatankuasa audit berhubung kait secara positif dengan prestasi firma. Dapatan kajian yang diperoleh berguna bagi pengawal selia terutamanya di Kementerian Perdagangan dan Industri, Lembaga Pasaran Modal (CMA), Tadawul, dan *Saudi Organization for Certified Public Accounting* (SOCPA) bagi menambah baik amalan CG. Bagi syarikat pula, kajian ini mencadangkan agar syarikat memberikan lebih penekanan terhadap penambahbaikan peranan dan kualiti lembaga pengarah dan ahli jawatankuasa audit memandangkan mereka terlibat dalam membuat keputusan yang boleh meningkatkan prestasi firma.

Kata kunci: prestasi firma, tadbir urus korporat, Arab Saudi

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LIST OF ABBREVIATIONS

Abb.	Full List
CG	- Corporate Governance
CMA	- Capital Market Authority
CML	- Capital Market Law
CPA	- Certified Public Accounting
ESIS	- Electronic Securities Information System
FE	- Fixed Effects models
GAAP	- General Accepted Accounting Principles
IFRS	- International Financial Reporting Standards
KSA	- Kingdom of Saudi Arabia
LM test	- Lagrange Multiplier Test
MCI	- Ministry of Commerce and Industry
MENA	- Middle East and North-African
OPEC	- Organization of the Petroleum Exporting Countries
RE	- Random Effects models
ROA	- Return on Assets
ROE	- Return on Equity
SAMA	- Saudi Arabian Monetary Agency
SEC	- Securities Exchange Commission
SOCPA	- Saudi Organization for Certified Public Accountants
SOX	- Sarbanes–Oxley Act
SSRC	- Saudi Share Registration Company
Tadawul	- Saudi Stock Exchange
VIF	- Variance Inflation Factor
WLS	- Weighted Least Squares
WTO	- World Trade Organization

CHAPTER ONE

INTRODUCTION

1.1 Background and Motivation of the Study

Firm performance has been under scrutiny, especially after the Asian, Russian Federation, and Brazil financial crisis that started in 1997, and the failing of some companies in the United States such as Enron, Xerox, Worldcom, and Parmalat, and the Saudi Stock Exchange (Tadawul) crash in early 2006. In addition, the separation and conflicts of interest between shareholders and managers in companies may lead to agency problems (Berle & Means, 1932; Fama & Jensen, 1983; Ishak & Napier, 2006; Jensen & Meckling, 1976; Mustapha & Che Ahmad, 2011). Corporate Governance (CG) is one solution to the problems stemming from these crises and to align shareholder and management interests, or to reduce conflicts of interest which will, consequently, result in enhancing firm performance (Al-Abbas, 2008; Al-Hamidy, 2010; Al-Hussain, 2009; Al-Moataz & Basfar, 2010; Al-Twajjry, 2007).

Most empirical studies have documented a positive link between CG mechanisms and CG, even though it is not easy to establish the link between the two (Bhagat, Bolton & Romano, 2008). There is a wide belief that CG best practices could lead to superior firm performance (Young, 2003). Different ideas and theories have surfaced; the most important issue is that a huge amount of empirical research in the firm performance discipline has reported an association between the practice of good CG and firm performance in different contexts in the world. For example, Aguilera and Cuervo-

Cazurra (2004); Amran (2010); Amran and Che Ahmad (2010); Becht, Bolton and Roell (2005); Brown, Beekes and Verhoeven (2011); Denis and McConnell (2003); Cicero, Wintoki and Yang (2010); Chahine and Tohme (2009); Chu (2011); Di Pietra, Grambovas, Raonic and Riccaboni (2008); John and Senbet, (1998); La Porta, Lopez DeSilanes and Shleifer (1999); Shleifer and Vishny (1997); and Tricker (2009) documented a positive link between CG mechanisms (board of directors, audit committee, and ownership structure) and firm performance. These studies have received considerable attention from policy-makers, culture, investors, academicians, and the public in the last two decades due to the effects of political, cultural and economic forces (Al-Harkan, 2005; Al-Hussain, 2009).

As a giant and leading economy in the Middle East region, Saudi Arabia has experienced a loss of millions of riyals in its stock market (Al-Hussaini & Al-Sultan, 2008; Samba, 2009). This leads to a reluctant environment where both local and foreign investors have stepped out of the Saudi marketplace to invest overseas (SAMA, 2010)¹. This clearly appears when Majlis Ash-Shura (Shura Council expresses its opinion on the State's general policies as referred by the Prime Minister) conducted an investigation into the government-owned companies that had invested outside the Kingdom of Saudi Arabia (KSA). In addition, the Capital Market Authority (CMA) suspended the trading of two Saudi firms (Bishah Agriculture Development Co. and Al Mawashi Al Mukairish Co.) because they reported a loss of 75 percent of their capital². These issues, which emerged recently in the marketplace of Saudi Arabia are, considered ambiguous circumstances and call for more empirical investigations (Al-Harkan, 2005). These days, however, Saudi

¹ See balance of payments data for Saudi Arabia's quarterly announcement by the Saudi Arabian Monetary Agency in August 7, 2010.

² For more details, see www.tadawul.com.sa.

Arabia has improved its large-scale economic and market policies and strategies to become the promising economy in the region (Al-Hussaini & Al-Sultan, 2008; Alsaeed, 2006; Al-Shammari *et al.*, 2008; Al-Twajry, Brierley & Gwilliam, 2002; Al-Razeen & Karbhari, 2007; Bley & Chen, 2006; Gulf Base, 2009).

Since Saudi Arabia is an Islamic state, its legal system, in general terms, adheres to the Islamic rules (Qur'an and Sunnah). The religion of Islam has a major effect on all aspects of life in Saudi Arabia. The values of Islam are belief and social order. The Islamic impact on business life and operations is represented in the emphasis on high ethical standards, a strong belief in human equality, and a belief in God's control over all events (Al-harkan, 2005). Because Saudi Arabia has a traditional Islamic system of government, the regulatory environment in which companies' affairs take place is influenced by Islamic law and may affect the practice of CG in Saudi Arabia.

Thus, gaps still exist in the literature of firm performance. To the best of the researcher's knowledge, the existence of a study examining the association of internal CG mechanisms with firm performance in the context of Saudi Arabia is still lacking. The paucity of research in the setting of firm performance in this country exists due to the ambiguity of the economic and political situations, restrictions on foreign ownership of securities and the shortage of auditing and common accounting regulations. In this aspect, this study extends the previous international and regional literature in the setting of Saudi Arabia by dedicating keen attention to the uniqueness of the Saudi environment. One unique issue that exists in the business environment of Saudi Arabia is the presence of Royal family members on boards of directors. It is indicated that certain groups have substantial influence on decision making (Che Ahmad, Houghton & Yusof, 2006; Richard, 2000;

Richard, Kirby & Chadwick, 2013). The existence of Royal family on boards of directors, as decision makers and owners closely overseeing management and affecting the decision making process, may help enhance firm performance. Therefore, this study argues that the existence of Royal family members on a board of directors would positively influence the firm's performance.

Another distinctive issue that exists in the Saudi market is that is outside financial experts sitting on the audit committee. Financial experts are assigned membership on the audit committee (but not as members of the board of directors) as a result of their knowledge base and experience in financial affairs. They arguably would be in a better position to practice monitoring and control which, turn, would lead them to make consistent judgments, reach consensus more often, and have better insight than audit committee members lacking in this experience (Kalbers & Fogarty 1993; Lee, Mande & Ortman, 2004; Yatim, Kent & Clarkson, 2006). This study argues that the existence of outside financial experts on the audit committee improves firm performance due to their technical expertise in accounting or finance.

This study also addresses the issue of ownership structure in Saudi Arabia, as there is a specific classification of this structure in the Saudi environment. This classification includes the domination of Royal family ownership, non-Royal family ownership, government ownership and domestic corporate ownership. The existence of Royal family owners as an influential family that is more powerful than others means they may influence the behaviour of others to get things done as Clark (2004) argued and they contribute to decreasing possible mismanagement and wrongdoing (Al-Ghamdi, 2012). Family ownership can be related to family-controlled firms and non-family-controlled

firms (Chami, 1999; Lee, 2004; McConaughy, Walker, Henderson & Mishra, 1998; Mishra, Randoy & Jenssen, 2001). Both have influence on management decision making and, hence, affect firm performance. With regard to government ownership, this group of owners has more power than others in that they are considered to have a more controlling and monitoring effect on firm performance (Aussenegg & Jelic, 2003; Mak & Li, 2001; Sun, Tong & Tong, 2002). As for domestic corporate ownership, this group of ownership is found in many emerging countries among the largest group of blockholders and provides significant benefits to firms by reducing the costs of monitoring the alliances or ventures between firms and their corporate blockholders (Allen & Phillips 2000; Claessens, Djankov & Lang, 2000). More specifically, the existence of this classification of ownership in the setting of Saudi Arabia is argued to have an impact on agency costs that, in turn, influences firm performance.

Therefore, this study examines board of directors characteristics (board Royal family members, board size, board independence, board meetings, board financial knowledge, CEO duality, and board multiple directorships), audit committee characteristics (audit committee outside financial expertise, audit committee multiple directorships, audit committee size, audit committee independence, audit committee meetings and audit committee financial expertise) and ownership structure (Royal family ownership, non-Royal family ownership, government ownership and domestic corporate ownership). In addition, this study introduces the board of directors' effectiveness score, including Royal family members as a newly introduced variable to the board of directors' effectiveness score and the audit committee effectiveness score including the newly introduced variable of audit committee outside financial expertise, that have not been addressed by the

previous empirical studies (Agrawal & Knoeber, 1996; O'Sullivan *et al.*, 2008; Ward *et al.*, 2009). It is worth noting that this requirement of outside financial expertise in the audit committee is unique to the Saudi environment, to the researcher's knowledge. This study argues that these types of aggregated measurement would avoid the inconsistency of using the individual characteristics of board of directors or audit committee examined by the extant research (Raghunandan & Rama, 2007). Previous research resulted in a number of conflicting outcomes owing to the fact that they have examined board and audit committee characteristics individually, as well as how each may assist in terms of overcoming agency problems; otherwise stated, individual mechanisms rely on their counterparts. In a comparable vein, it is suggested by Agrawal and Knoeber (1996) that the results showing the effects of individual characteristics might be flawed as the effects of some single characteristics are diminished in the combined model. In the same way, the measurement of the combined effect implies a much stronger impact when compared with the assessment of individual effects (Chahine & Tohme, 2009; Di Pietra, Grambovas, Raonic & Riccaboni, 2008; Dogan, Elitas, Agca & Ogel, 2013; Fosberg & Nelson, 1999; O'Sullivan, Percy & Stewart, 2008).

With regard to firm performance, recent studies have pointed out that there is a relationship between CG and firm performance. The good performance of the companies attracts the investments (McKinsey & Institutional Investors Inc., 2003). So many companies around the world try to improve their performance for the purpose of getting fund from investors in order to expand and grow. On the other hand investors need to have confidence that the company is being well managed and will continue to be profitable investments (McKinsey & Institutional Investors Inc., 2003).

Furthermore, this thesis focuses on two different forms of firm performance measures, namely market-based and accounting-based performance, in establishing association with CG mechanisms. Market-based performance takes into account stock prices, which highlight the firm data's economic value. Tobin's Q is the most commonly utilised measure for reflecting market-based performance. Stock returns are used by Tobin's Q to assess firm performance, which is inclined to highlight expected future performance as opposed to actual firm performance (Joher, Ali, Shamsheer, Annuar & Ariff, 2000; MacAvoy & Millstein, 1999). Accounting-based performance is centered on historical results, such as earnings, operating profits, and operating revenues, with the most commonly utilised, as shown in the literature being Return on Assets (ROA) and Return on Equity (ROE) (Alzharani, Che Ahmad & Aljaaidi, 2011; Anderson & Reeb, 2003; Bhagat & Bolton, 2008; Maury, 2006; Sun & Tong, 2003; Yermack, 1996). Furthermore, this thesis also fills the existing gap by using the panel data approach utilising Weighted Least Squares (WLS) models covering a five-year period from 2007 to 2011.

1.2 Problem Statement

Since the establishment of Saudi Arabia in 1932, the Saudi economy has faced successive changes in all fields of life. For instance, Saudi Arabia has adopted some important strategies and policies that have enabled it to become a profitable business environment not only for local investors but also for regional and foreign investors (Aba-Alkhail, 2001; Al-Ammari, 1989; Al-Hussaini & Al-Sultan, 2008; Al-Mulhem, 1997; Al-Shammari *et al.*, 2008; Bley & Chen, 2006; Gulf Base, 2009; Kamal, 2007).

With all of these changes, Saudi regulations were forced to issue many provisions to find steady growth in the economy. One of these provisions is the code of CG, issued by the Board of CMA in 2006 to regulate companies in Tadawul, improve the role of management, and protect the rights of shareholders and stakeholders alike. This code of CG adopts best practice principles so that companies have the flexibility to implement them (CMA, 2014). This flexibility creates different levels of adoption of the best practice principles among the Saudi companies because the decision of selecting the best practice for the company is put in the hands of companies' directors. It is expected that such decisions would be affected by the behaviour of management, or misapplying of CG could harm the company, shareholders' wealth, and the Saudi economy (Al-Abbas, 2009).

It is well established that compliance with the CG code in stock markets may lead to efficient stock markets pooling private funds and allocating them for corporate investment. This gives firms access to cheaper capital than traditional bank financing and also helps them to mitigate financial risk. In this case, applying good CG makes companies score better in performance and be less affected by economic crises (Bennedsen, Nielsen & Nielsen, 2007; Benos & Weisbach, 2004; Huang *et al.*, 2011; Stulz, 1999).

It is noted from the code of CG in Saudi Arabia that it contains many advantages, including its emphasis on the rights of shareholders by providing adequate, accurate information, and is careful not to distinguish between shareholders regarding the provision of information. In particular, the Saudi market has witnessed an apparent disparity in information, causing significant damage to stock trades. In addition, the code of CG in Saudi Arabia facilitates greater participation by shareholders at a meeting of the General

Assembly. It also encourages the need to use media technology to connect to shareholders, and that the company should avoid any action that may impede Shareholders' rights to vote (CMA, 2014).

In spite of applying good CG practices, many Saudis have lost their investments in the Saudi market (Al-Hussaini & Al-Sultan, 2008; Samba, 2009). This has made the Saudi market not as promising a place for local and foreign investors, which encouraged them to find better places to invest than the Saudi market (SAMA, 2010). Majlis Ash-Shura has investigated the investments of big government-owned companies abroad instead of in local markets (Majlis Ash-shura, 2014). In addition, CMA has stopped two firms, Al Mawashi Al Mukairish Co. and Bishah Agriculture Development Co., because of substantial losses that reached more than three quarters of their capital (Tadawul, 2014). These events have led to ambiguous circumstances and an urgent call for future studies to investigate these issues.

However, testing firm performance has been conducted in different environments (Kang & Zardkoohi, 2005). In the case of Saudi Arabia, the practices of CG may be different from those of other countries. The company Act, economic, cultural and political issues have tremendously affected application of CG (Shleifer & Vishny, 1997). The stock market in Saudi Arabia is dominated by three groups of ownership: family (Royal and non-Royal), government and domestic corporations. Each of these three groups of ownership usually has a representative on the company's board of directors and, consequently has better access to insider information and therefore affects firm performance (Al-Shammari *et al.*, 2008). The system of government in Saudi Arabia is a traditional Islamic system that has a big influence on the regulatory environment.

However, the practice of CG in Saudi Arabia may be affected by Islamic law (Al-harkan, 2005).

The extant literatures on firm performance has reported that there is an association between CG mechanisms and firm performance by examining the effect of board of directors characteristics (i.e., board size, independence of directors, meetings, financial knowledge, CEO duality and multiple directorships), audit committee characteristics (i.e., multiple directorships, size, independence, meetings, and financial expertise) and ownership structure on firm performance. However, there are two contextual variables in the Saudi environment that have not been discussed in the previous studies but are examined by the present study. The first variable is Royal family members on the board. Typically, the role of the Royal family members on the board of directors is critical in that their powers may enable them to oversee management. Therefore, their influence may maximize shareholder wealth and reduce the potential for irregularities and mismanagement (Al-Ghamdi, 2012). The second variable is outside financial experts as members of audit committee. However, hiring financial experts with membership on the audit committee (who are not on the board of directors) as a result of their knowledge base and experience in financial affairs is a distinctive issue of the corporate scenario in the context of Saudi Arabia. This enhances the view that outside expert audit committee members are usually in a better position to practice monitoring and control which, in turn, leads them to make consistent judgments, reach consensus more often, and have better insight than internal audit committee members who are already on the board of directors.

Moreover, this study argues that the existence of Royal family members on the board and outside financial experts on the audit committee will have favorable effects on firm performance.

However, recent studies indicate that the good performance is affected by CG mechanisms and elaborate that the good performance of the companies attracts the investments (McKinsey & Institutional Investors Inc., 2003). In this case the companies' performance around the world would improve for the purpose of getting fund from investors in order to expand and grow. In the same time, investors need to have confidence that the company is being well managed and will continue to be profitable investments (McKinsey & Institutional Investors Inc., 2003).

In the setting of Saudi Arabia, there are three monitoring groups of shareholders that are likely to dominate the companies: family (Royal and non-Royal), government, and domestic corporations. Based on agency theory, the presence of such a classification of owners may affect firm performance. In particular, the degree of ownership of each type of the dominant groups leads to a variation in firm performance because of the variations in the level of agency conflicts and information asymmetry.

1.3 Research Questions

This research concentrates on whether CG mechanisms (board of directors, audit committee, and ownership structure) affect firm performance in Saudi Arabia. The following questions that relate to the mechanisms of CG are addressed in order to understand the effect of CG on firm performance:

1. Is board of directors effectiveness at an aggregate level (as composite score) and at the individual level, namely board Royal family members, size, independence, meetings, financial knowledge, CEO duality, and multiple directorships associated with firm performance?
2. Is audit committee effectiveness at an aggregate level (as composite score) and at the individual level, namely, outside financial expertise, multiple directorships, size, independence, meetings, and financial expertise associated with firm performance?
3. Are different types of ownership structures (Royal family, non-Royal family, government, and domestic corporations) associated with firm performance?

1.4 Research Objectives

The main objective of this study is to provide a comprehensive study of the effect of CG mechanisms and firm performance in Saudi companies listed in Tadawul, with particular focus on the question of whether CG mechanisms affect firm performance. The main objectives of this thesis are to:

1. Identify the association of board of directors effectiveness (board Royal family members, size, independence, meetings, financial knowledge, CEO duality, and multiple directorships) at individual and aggregate levels with firm performance.
2. Determine the association of audit committee effectiveness (outside financial expertise, multiple directorships, size, independence, meetings, and financial expertise) at individual and aggregate levels with firm performance.

3. Analyze the association of different types of ownership structures (Royal family, non-Royal family, government, and domestic corporations) with firm performance.

1.5 Research Significance and Expected Contribution

The CG literature is vast. A search for “Corporate Governance” in Google Scholar returned hundreds of thousands of references. This is due to the importance of CG all over the world (Brown *et al.*, 2011). The importance of effective CG was made clear in the OECD report (1999, P.7), as follows:

A good corporate governance regime helps to assure that corporations use their capital efficiently. Good corporate governance helps, too, to ensure that corporations take into account the interests of a wide range of constituencies, as well as of the communities within which they operate, and that their boards are accountable to the company and shareholders. This, in turn, helps to assure that corporations operate for the benefit of society as a whole. It helps to maintain the confidence of investors-both foreign and domestic and to attract more “patient”, long- term capital.

The significance of this research arises from its contributions to literature by introducing an initial empirical study of the relationship between CG mechanisms (board of directors, audit committee, ownership structure) and firm performance in Saudi Arabia in several ways:

1. This research adds to the contemporary literature by discussing and linking board of directors and audit committee effectiveness with firm performance. To the best of the researcher’s knowledge, the uniqueness of this thesis over other studies is the linking of board of directors’ characteristics and audit committee characteristics as a whole to catch the power of their effect on firm performance

with the inclusion of two new variables. The first one is Royal family members on the board. This group (as decision maker and owner) closely oversees management and would affect decision making to optimize the wealth of shareholders (Che Ahmad, Houghton & Yusof, 2006; Clark, 2004). In Saudi Arabia, a number of Royal family members are assigned positions on the board and act as managerial associates, thus they oversee management very carefully, which helps to reduce the potential of wrongdoing and poor management (Al-Ghamdi, 2012) . This, in turn, may positively influence firm value. The second variable is outside financial expert members on the audit committee. The existence of outside financial experts as members of the audit committee is a distinctive issue of Saudi-listed companies. Usually these outside financial experts are not members of the board of directors but are assigned to the audit committee for their knowledge base and experience in financial affairs. These members are usually in a better position to practice and control which, in turn, leads them to make consistent judgments, reach consensus more often, have a more in-depth understanding of auditing issues and risks and their procedures, and have better insight than normal internal audit committee members (Cohen, Krishnamoorthy & Wright, 2002; DeZoort & Salterio, 2001; Knapp, 1991; Yatim *et al.*, 2006). Therefore, when these characteristics perform in a substitutable or complementary fashion in making decisions, board of directors' and audit committee characteristics should be tested as a combination and not separated from each other (e.g., Cai, Qian & Liu, 2009; O'Sullivan *et al.*, 2008; Ward *et al.*, 2009).

2. With regard to theoretical contribution, this study uses three theories —agency theory, stewardship theory, and resource dependence theory—all of which have

been widely adopted in regard to relating firm performance with CG. This is because there is no individual or wide-ranging theory that explains the concerns affecting firm value in the marketplace. Moreover, the argument is commonly posed that there is a need for a multi-theoretic approach to gaining insight into CG mechanisms (Daily, Dalton & Rajagopalan, 2003; Ruigrok, Peck, Tacheva & Hu, 2006). In mind of this research, there are three pivotal theoretical standpoints relating to agency theory, as the key theory, that are utilized in order to postulate the link between firm performance and CG mechanisms in the context of Saudi Arabia.

3. This thesis provides a various class of ownership structure that suits the setting of Saudi Arabia. Previous studies in developed and high-developing countries have carried managerial ownership as a fiduciary structure for firm ownership (e.g., Ameer & Abdul Rahman, 2009; Bhagat & Bolton, 2008; Brown *et al.*, 2011; Han *et al.*, 1999; La Porta, Lopez-De-Silanes & Shleifer, 1999; McConnell & Servaes, 1990). This class of ownership may be unsuitable to the setting of Saudi Arabia because ownership structure in Saudi Arabia is dominated by three groups of ownerships: family (Royal & non-Royal), government and domestic corporations (Chahine, 2007; Chahine & Tohme, 2009; Saidi, 2004).
4. As a methodological contribution, the firm performance framework model 1 includes board of directors characteristics, audit committee characteristics and ownership structure. This model introduced the two new variables (Royal family member on the board and outside financial experience member on the audit committee) which have not been tested by the researchers. In addition, the

existence of a new classification of ownership, Royal family ownership, represents contextual uniqueness in GCC countries.

5. As a methodological contribution, this research employs panel data for the years between 2007 and 2011, where the same companies serve on the panel over five years, and which gives advantage to measurement of the changes that take place between points in time (Cavana, Delahaye & Sekaran, 2001). This is especially true since the Saudi CG code was introduced in 2006.
6. As a practical contribution, this research can provide some meaningful insights to regulators such as the CMA, Saudi Organization for Certified Public Accountants (SOCPA) and International Financial Reporting Standards (IFRS). Currently, companies in Saudi Arabia include members of the audit committee that do not serve on the board of directors, which distinguishes them from developed and high-developing countries in which members of the audit committee should be a member of board of directors or an employee of the company. However, this is standard and acceptable in the specific Saudi environment. This research reveals the status of Saudi companies that provides valuable information to potential investors at large concerning the potential companies' performance.

1.6 Research Scope

This thesis concentrates on testing the relationship between CG mechanisms (board of directors, audit committee and ownership structure) and firm performance. Firm performance is measured using market-based measurement (Tobin's Q and accounting-based measurements ROA and ROE) to test whether there are significant differences in the relationships for both measures. With regard to board of directors characteristics, the

variables examined in this thesis are Royal family members, board size, the independence of directors, meetings, financial knowledge, CEO duality and multiple directorships. In terms of audit committee characteristics, the variables tested in this thesis are audit committee outside financial expertise, multiple directorships, size, independence, meetings, and financial expertise. With respect to ownership structure, this thesis tests four types of ownership classifications: Royal family ownership, non-Royal family ownership, government ownership, and domestic corporate ownership. For examining the relationship between CG mechanisms and firm performance, agency theory, stewardship theory and resource dependence theory are used accordingly.

The final sample in this thesis was 572 observations for companies listed on Tadawul between years 2007-2011, during which many important events occurred such as the financial crisis (either locally or internationally) and of the introduction of the Saudi CG code in 2006. This thesis uses secondary data collected by hand from the companies' annual reports, official websites, newspapers and Thomson Advance Database.

1.7 Research Structure

This research consists of six chapters. Chapter one, the introduction, includes background and motivation of the study, justification for the study and contributions of the study. Chapter two introduces an overview of Saudi Arabia including historical background, ownership structure, legal system, regulatory organizations, the accounting and auditing profession, and the development of CG. Chapter three includes a summary of the prior literature on theories and CG mechanisms (board of directors, audit committee, ownership structure) and firm performance. Chapter four introduces research design and

methodology that explains conceptual framework and theoretical justifications for the hypotheses development, as well as research instruments, variables measurement, research methodology and data analysis techniques used in this thesis. Chapter five presents the findings and discussions in two main parts. The first part presents the result of choosing a suitable model for this study and diagnostic test. The second part presents the results of multivariate tests of the two models (model 1 & model 2), testing the relationship between CG mechanisms and firm performance. Chapter six presents the analysis of data and research findings. Chapter six is the final chapter exhibiting findings of the study from the analysis of the data and their significance to the study. At the end of the chapter, a brief summary and discussion of the overall study, and highlights of its findings are presented. A number of recommendations and suggestions for future research are also provided.

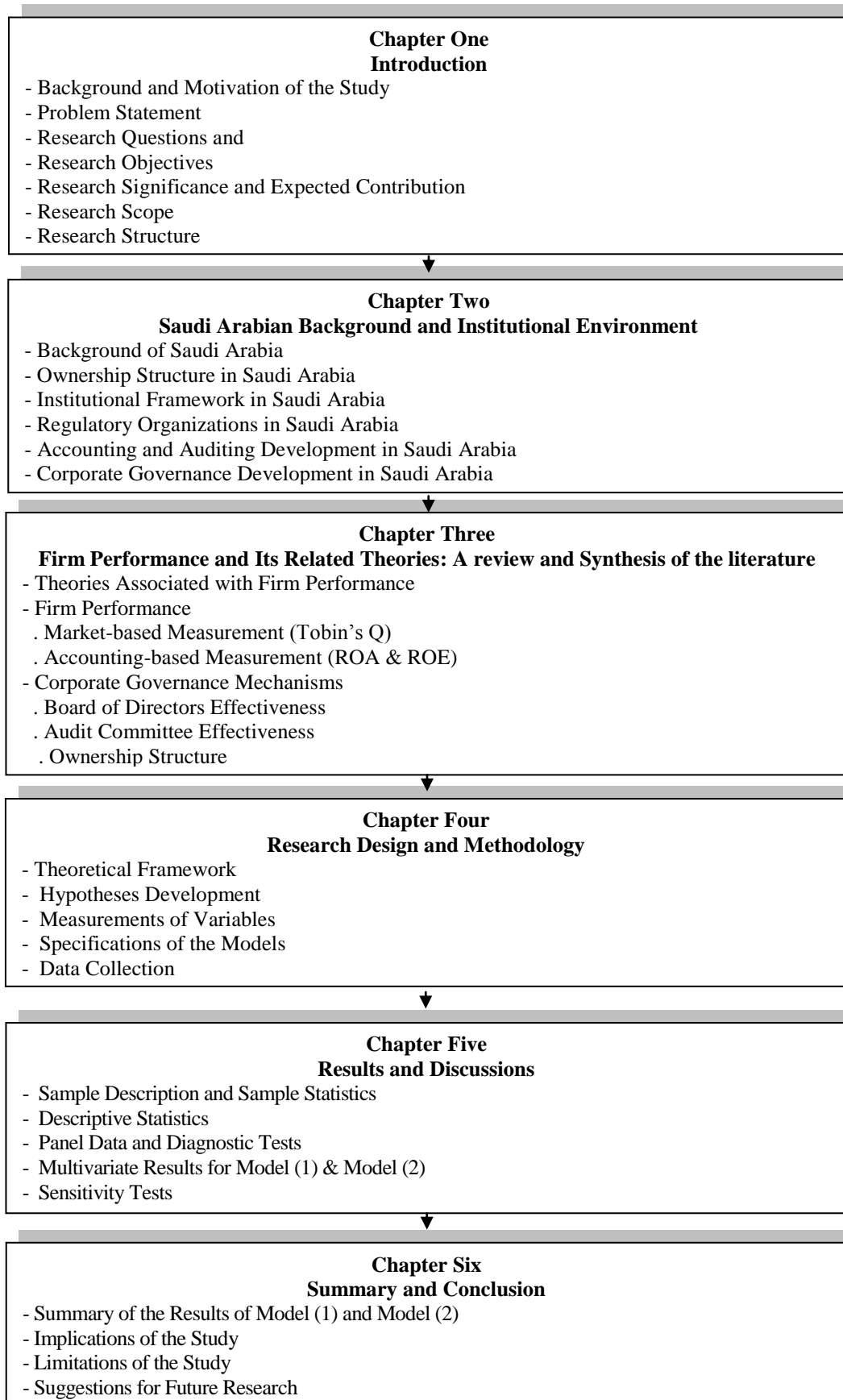


Figure 1.1
Research Structure

CHAPTER TWO

SAUDI ARABIAN BACKGROUND AND INSTITUTIONAL ENVIRONMENT

2.1 Introduction

The preceding chapter provides an overview of the complete thesis structure including study background, problem statement research questions and objectives, significance of the study, and thesis scope and layout. The present chapter provides the background of Saudi Arabia and its institutional environment. Following the chapter introduction, section 2.2 provides the background of Saudi Arabia, section 2.3 highlights the ownership structure in the country, and section 2.4 presents its institutional framework. Section 2.5 discusses its regulatory organizations, section 2.6 highlights its accounting and auditing development, and section 2.7 discusses CG development in Saudi Arabia. The final section provides a summary and conclusion of the chapter.

2.2 Background of Saudi Arabia

Saudi Arabia was established³ by King Abdul Aziz bin Abdul Rahman Al-Saud on September 23, 1932. The country's establishment was, and is based on the Islamic concept. Following King Abdul Aziz's unification of the Arab provinces in a cohesive country, through Islam different Arab nations move like a spinning wheel in one single

³ King Abdul Al-Aziz unified three main states in Saudi Arabia: AlHijaz, Nejd, and AlHasa; however before the expansion of Saudi Arabia, the tribal norms governed in Nejd and AlHasa; while AlHijaz was more modernized due to its proximity to Egypt.

structure. It was the strength of faith compared to anything else which allowed King Abdul Aziz to establish Saudi Arabia (Al-Farsy, 1997; Al-Rasheed, 2002).

Saudi Arabia is situated in the Arabian Peninsula in South west Asia and is considered the largest country, in terms of size in the Middle East and the biggest sand mass on the planet with its area constituting 95 percent (approximately 2,000,000 SKM) of desert area. Saudi Arabia's population is estimated at more than 28.38 million of which 19.41 are Saudi citizens. The Kingdom's currency is the Saudi riyal, which is gold-plated, convertible and divided into one hundred halalas. The exchange currency rate from Saudi riyals to U.S. dollar is 3.75 per dollar (Ministry of Economy and Planning, 2014). Saudi Arabia is the home of the two holiest cities in the Islamic world, Mecca and Medina. The official language of the country is Arabic but English is widely used in health and business units. The country is a monarchy and is governed by the male members of the Royal Family.

Additionally, Saudi Arabia's monarchy system is centralized which enables the King (currently King Abdullah) an extensive reaching authority, with the inclusion of internal and external affairs management. The top positions in internal affairs, foreign affairs and defense ministry are appropriated to male descendants of King Abdul Aziz. Three authoritative bodies are responsible for issuing and approving policies, regulations, and rules—the council of ministers, the consultative council and various individual (Federal Research Division, 1993). First, the Council of Ministers was established in 1953 and is considered the main executive entity of the government. The Council has the authority to issue ministerial decrees but has no distinct power from the King, who provides the approval of all the Council's decisions. The first deputy prime minister and the second deputy prime minister are the crown prince and the next prince in line of succession. In

1992, Council members consisted of the King, the Crown Prince, three royal advisers holding official positions as state ministers without portfolio, five state ministers and the heads of 20 ministries, including the head of the Ministry of Defense and Aviation, Prince Salman. The ministries comprise the ministries of agriculture and water, commerce, communications, defense and aviation, education, finance and national economy, foreign affairs, health, higher education, industry and electricity, information, interior, justice, labor, and social affairs, municipal and rural affairs, petroleum and mineral resources, pilgrimage affairs and religious trusts, planning, post, telephone and telegraph, public works, and housing. Along with the above ministries, the Saudi Arabian National Guard recently became a ministry and is headed by Crown Prince Miteb bin Abdullah (the reigning King's son). The governors of Medina, Mecca, Riyadh and the Eastern Province and the head of the Saudi Arabian Monetary Agency (SAMA) and the General Petroleum and Mineral organization (Petromin) were also just accorded the ranks of minister. Meanwhile, the Ministry of Interior, the one responsible for domestic security, is the second overall political influence to the Ministry of Defense and Aviation. Currently Prince Mohammed bin Nayif is the minister of interior.

Moreover, the consultative council, known as Majlis Ash-Shura, was established in 1991 as a legislative body that provides advice to the King concerning issues that are crucial to the country. It is described as a current version of a traditional Islamic concept where an accessible leader can consult with experienced and learned citizens, which has always been practiced by the rulers of Saudi Arabia. Currently, the Council comprises 150 members who are appointed by the King for a four-year renewable term. Members are assigned to committees according to their experience. A total of 13 committees handle

human rights, education, culture, information, health and social affairs, services and public utilities, foreign affairs, administration, Islamic affairs, economy and industry, and finance (Majlis Ash-Shura, 2013).

Prior to 1937, Saudi Arabia was one of the poorer countries and depended on agriculture and Hajj fees as its sources of income. These two sources are limited and exhaustible and not sufficient to meet the people's needs. At that time, King Abdul Aziz realized that Saudi Arabia needed more money and hence, he agreed to grant the American oil company Standard Oil of California (SOCAL)⁴ a license to explore for oil in Saudi Arabia. The discovery of the first oil field on March 3, 1938 produced a commercial amount. Following the discovery of oil, revenue started to pour into the government coffers and as a result, after World War II, the country experience a huge demand for oil production (Al-Sayari, 2003).

⁴SOCAL formed a separate company (called a subsidiary company) dedicated solely to Arabian oil: The California Arabian Oil Company (CASOC).

Table 2.1

Saudi Arabian Key Economic Data (Billion US\$ unless noted otherwise)

	2006	2007	2008	2009	2010	2011
Nominal GDP	1335.6	1439.5	1786.1	1412.6	1709.7	2239.1
% Change	12.95	7.78	24.08	- 20.91	17.38	30.96
Real GDP (% Change)	3.15	3.32	2.92	.10	5.13	7.05
Oil	731	789	1086	663	873	1289
Non-Oil	374.6	405.5	440.1	454.6	496.7	568.1
Government	230	245	260	295	340	382
Unemployment (Males) (% of Saudi Labor Force)	12.00	11.00	9.80	10.50	10.00	12.20
Population (Million)	24.12	24.94	25.79	26.66	27.56	28.38
Saudi	17.27	17.69	18.11	18.54	18.97	19.41
Non-Saudi	6.85	7.25	7.68	8.12	8.59	8.97
Oil Price (\$/barrel) West Texas Intermediate	66.00	72.29	99.63	61.66	79.36	95.03
Saudi Average	61.05	68.77	95.16	61.38	77.75	107.80
Current Account	371.0	350.0	502.7	78.6	250.3	594.2
As percent of GDP	27.78	24.31	28.14	5.56	14.64	26.54
Government Budget Balance	280	177	581	- 87	88	291
Revenues	674	643	1,101	513	742	1,118
Expenditures	394	466	520	600	654	827
Budget balance as percent of GDP	20.96	12.30	32.53	- 6.61	5.15	13.00
Cost of Living (% Change)	2.20	4.10	9.90	5.10	5.30	5.00

Source: SAMA, the Saudi Arabian Monetary Agency , (2006), (2009), (2013)

The new era of development and wealth for Saudi Arabia started specifically after the Arab-Israeli War in 1973, when oil prices increased dramatically, resulting in a high return on income. The discovery of oil has brought about gradual changes to the social and economic infrastructure including communication, transportation, education and health, and other social facilities. Saudi's economy depends very largely on petroleum exports, which represents 57.56 percent of its GDP. The Saudi oil reserve is more than 265.4 billion barrels, representing one quarter of the world's proven petroleum reserves, with oil production averaging 9.3 million barrels daily as of 2011. This makes it the largest producer of oil in the world (SAMA, 2013). Additionally, Saudi Arabia owns a large percentage of petroleum production among the Organization of the Petroleum Exporting Countries (OPEC) with 34 percent of the total output; this explains why Saudi Arabia has a leading role in affecting prices of petroleum around the globe (OPEC, 2013).

The huge oil reserves and mineral resources in Saudi Arabia, coupled with an expanding domestic market, liberal labor policies, extensive privatization plans, and an ample package of investment incentives, makes it one of the top investment locations in the Middle East (Al-Sayari, 2003). In 2005, in an attempt to join the World Trade Organization (WTO), extensive efforts, painstaking negotiations and many regulations were employed (Ministry of Commerce and Industry, 2006). As a whole, Saudi Arabia's business environment has experienced increasing growth, which precipitated supporting its economy by enhancing regulations such as the CMA and the accounting and auditing profession. Nevertheless, despite this increasing progress and development, many still criticize the reforms for their slow and outdated elements that are unable to handle changes taking place in the global business environment (Alsaeed, 2006).

2.3 Ownership Structure in Saudi Arabia

Ownership structure is an important factor in determining the CG system. Countries that employ the code of law are described as having more concentrated shareholdings, complex ownership arrangements, and less effective laws for investor protection (Brown *et al.*, 2011). Therefore, concentrated ownership matches the power and incentive to contribute to management decisions when these decisions go against their interests (Shleifer & Vishny, 1997). Thus, the absence of separation between ownership and control reduces conflicts of interest and increases the shareholders' value (Morch, Shlieifer & Vishny, 1998). On the other hand, in countries following common law, companies' shareholdings are basically widely dispersed, and strong investor protection laws exist to protect the minority shareholders' interests (La Porta *et al.*, 1998). The existence of one or more concentrated shareholders is generally a source of agency

concerns in some countries where ownership arrangements are alternatives to an underdeveloped institutional framework (Brown *et al.*, 2011).

In the context of East Asian companies, cross-shareholders and controlling shareholders are common and may influence CG. Based on Claessens *et al.* (2000) involving nine East Asian countries—Japan, South Korea, Hong Kong, Malaysia, Indonesia, the Philippines, Singapore, Thailand and Taiwan—more than 67 percent of firms are controlled by single shareholders, while in about 60 percent of these firms, managers are related to the controlling shareholder and the distinction between management and ownership control is slight. The results also revealed that some families even control most East Asian economies.

In the context of Saudi Arabia, companies are characterized as more concentrated where shares are held by the state and families as well as individuals. Despite the relatively free market economy employed by Saudi Arabia, with the predominance of the private sector, the primary public utilities and services are government-owned and controlled. But the stock market is dominated by family holdings, as 75 percent of the companies are family-owned (Al-Tonsi, 2003). This can be attributed to various factors. First, the majority of companies listed in Tadawul were originally owned by families before undergoing public initial offerings for listing. These companies are primarily managed by the founding families who were already rich and well established and who have been controlling the business for a significant number of years. Second, a few privileged families were noted to contribute to trade activities, while the rest of the population takes part in labor, which hardly produces a sufficient amount of income to satisfy their needs.

The rest of the companies (25 percent) that are controlled by the government are owned by the individuals who started them (Al-Harkan, 2005). The government blockholdings are attributed to privatization plans that are seriously considered for government-owned companies. For instance, the Saudi Telecom is primarily a government-owned company (with 70 percent of the capital owned by the government). Companies of this caliber have undergone initial public offerings for a Tadawul listing when a government proportion should be offered (Capital Market Authority, 2013), e.g. 80 percent of the Saudi Basic Industries Corp. and Saudi Electricity Company are government-owned.

Undoubtedly, various reasons in combination makes the Tadawul an illiquid exchange, characterized by large blockholdings which are controlled either by institutional investors like government agencies or founding families. First, only the minority of the Saudi population participates in stocks activities, particularly following a stock market crisis. Second, foreign investment is lacking in Tadawul since its inception in 2002, owing to the weak regulations and lack of clear vision in the Saudi market system. Arab companies, including Saudi firms, suffer from the legacy of fragmented culture and history that is not consistent with development of effective management practices (Ali, 1995; Chahine & Tohme, 2009).

Effective CG is a combination of both large and small investors' rights being legal protected (Shleifer & Vishny, 1997). However, in countries with ineffective shareholder protection laws, conflicts exist between large shareholders and minority ones (La Porta *et al.*, 1999). Empirical literature also shows that ownership structure affects managerial behavior and consequently, firm performance (Amran, 2010; Chahine & Tohme, 2009).

2.4 Institutional Framework in Saudi Arabia

The country's institutional framework plays a key role in developing its regulations and practices. As Saudi Arabia is the place Islam originated, its institutional framework is fundamentally based on Islamic principles. In addition, the constitution of Saudi Arabia is built on two key Islamic law sources, the Holy Quran, and the Sunnah and other sources that are related to Islamic law (Shariah), which is considered as the code of conduct/religious law. The Holy Quran is the book of God, the direct word of Allah and the most important source of guidance and laws, while the Sunnah is second to the Quran as a source of guidance and rulings. It is described as Prophet Mohammed's (peace be upon him) traditions and an inspiration from Allah. In fact, the Sunnah confirms the Quran's rulings with detailed concepts, laws, and practical matters, and it provides rulings that are not stated explicitly in the Quran (Al-Ghamdi, 2012; Al-Harkan, 2005; Al-Rasheed, 2002; Al-Sehali, 2004).

Saudi Arabia is very strongly based in religion, and religious conservatives have enormous influence on the country, particularly on the way of social and economic life. Islamic law protects the rights of individuals and provides them with the opportunity to obtain effective redress for violation of their rights, thereby ensuring that all are treated equitably. However, the Royal Decree for the Regulation of companies No. M6 of 1969 provided in Article 232 for the establishment of a commission for the settlement of commercial companies' disputes. When the jurisdiction of this commission was later expanded to cover commercial disputes, it then became known as the Commission for the Settlement of Commercial Disputes. Until 2005 (the year of their entrance into the WTO), Saudis had not used international arbitration or adjudication mechanisms in their

commercial contracts and always used mechanisms compatible with Islamic Law and Regulations. In fact, all matters are solved using Islamic law, but the prevailing procedures are more time-consuming than those in the Western countries. Saudis maintain that they have made tremendous progress in resolving the backlog of commercial disputes, almost to the point of complete elimination. Moreover, the government no longer requires exclusive applicability of Saudi law in the resolution of private commercial disputes. In practice, however, Saudi courts tend to apply Saudi law in commercial disputes litigated in Saudi, even when the relevant contract contains a foreign choice of law provision and provides for a foreign forum to have jurisdiction. Business-to-business arbitration assistance, although expensive, is available from local Chambers of Commerce for some types of disputes (Al-Ghamdi, 2012; Al-Harkan, 2005).

Furthermore, the culture in Saudi Arabia is affected by hierarchical authority and close relationships with family and friends. The hierarchical authority is evident in Saudi culture, as the regulations' form and content are strongly influenced by the individual makers of the regulations' power and personality. Additionally, family and friends play a key role in the power level in Saudi culture. Those with less power depend on their relatives or friends with high positions and power (Al-Harkan, 2005; Al-Rasheed, 2002; Sabri, 1995).

Saudi Arabia's political associations and extensive economy with Western countries have had a significant cultural effect on the former. After significant investments in joint-venture projects in Saudi Arabia made by the U.S., Britain, and Germany, some of the firms created from these projects do not follow the Western countries' procedures and strategies in terms of operations, administration, and their accounting practices, including

company law systems, standards of accounting, auditing, and auditor independence. This is evident in Saudi ARAMCO, which has a monopoly over the production and refining of oil in Saudi Arabia, and is a former joint U.S.-Saudi company (Al-Abbas, 2006; Al-Angri, 2004; Al-Ghamdi, 2012; Al-Harkan, 2005).

While some banks and companies adhere to international accounting standards, companies listed in Tadawul are stipulated to adhere to and employ national accounting standards (IFRSs, 2011). Nevertheless, the conceptual framework of U.S. and Saudi standards share a large commonality. More specifically, Saudi standards stem from a pioneering effort that resulted in the first comprehensive Arabic standard (Aba-Alkhail, 2001; Al-Ammari, 1989; Tawfik, 1990). The overall nature of Saudi society is characterized by high context communication, the key role of the state in the economy, the political power wielded by interest groups, and the inclination for personal relationships rather than achievement of task.

Based on the above discussion, the institutional framework of Saudi Arabia as related to the business environment is influenced first by the culture of hierarchical authority, significant relationships among family and friends, and the political ties with Western legislations, and second, by the Islamic framework which controls and influences all aspects of life, including the business environment. In sum, the Saudi institutional framework must be consistent with Islamic regulations and the Saudi environment characteristics.

2.5 Regulatory Organizations

It is crucial to provide a description of the most significant regulatory organizations in Saudi Arabia, since the aim of this study is to examine the association of GC mechanisms and firm performance. In Saudi Arabia, CG practices are overseen by four organizations: the Ministry of Commerce and Industry (MCI), the Capital Market Authority (CMA), Tadawul and the Saudi Organization for Certified Public Accounting (SOCPA).

2.5.1 The Ministry of Commerce and Industry (MCI)⁵

Due to the notable expansion of business and commercial activities and growth in Saudi Arabia, Royal Decree No. 10/22/5/5703 dated 11/07/1373 Hijri (17 March, 1954), was passed to establish MCI, an entity entrusted with the responsibility of organizing internal and external trade and trade development. Specifically, the MCI is responsible for control of CG and the Saudi accounting profession.

It is directly responsible for main market offerings and regulations, as well as supervision of joint stock companies and operations of all Saudi companies. According to The Company Act of 1965 and its amendments that list business forms and structures and regulate Saudi companies, joint stock companies and limited liability partnerships are the most attractive to foreign investors (MCI, 2014).

Companies in Saudi Arabia are established according to The Company Act of 1965 and are stipulated by the MCI to adhere to Saudi Arabian Generally Accepted Accounting Principles. These companies are required to have their financial statements audited by an

⁵This was known as the Ministry of Commerce before its integration with the Ministry of Industry in 2003.

auditor licensed in Saudi Arabia and to file annually with the MCI. The primary regulations of auditing and accounting are listed in The Company Act of 1965, Foreign Capital Investment Act, Zakat and Tax Regulations (Ministry of Finance, 1951), the Saudi Arabian Standards of General Presentation and Disclosure, and Saudi Arabian Auditing Standards (MCI, 2014; SOCPA, 2014).

The MCI granted the board of directors of SOCPA the powers to realize the assigned objectives of the organization. Board decisions are followed and executed by SOCPA's Secretary General, while technical committees establish general rules that organize the profession, including those pertaining to the establishment and development of accounting and auditing standards, professional ethics, organization of SOCPA fellowship examinations, and practice-monitoring programs, among others. These committees comprise experts and members equipped with specialization, academic staff, and practitioners from companies and government departments (SOCPA, 2014).

The MCI keeps strict regulations for companies that violate The Company Act of 1965 in the way of strict punishments as stipulated in the law itself. In particular, the Enforcement Department of the CMA monitors adherence with the law and conducts investigation of potential violations of the law. Instances of breaches of the law are provided on Tadawul's website (Tadawul, 2014).

2.5.2 The Capital Market Authority (CMA)

The Saudi government acknowledges the significance of the presence of an authority that regulates the capital market and as such, the CMA was established under the purview of the Capital Market Law (CML), issued by Royal Decree No. M/30 on 2/6/1424H (8

January, 2003). The CMA is a government organization that is financially, legally, and administratively independent. It is directly accountable to the President of the Council of Ministers and is responsible for regulating and developing the Saudi Arabian capital market. In addition, it issues the necessary rules and regulations to implement the CML provisions in the creation of a suitable investment environment (CMA, 2014). The CMA has the authority to regulate Tadawul, safeguard investors and the public from unjust and unsound practices that entails fraud, deceit, cheating, manipulation and insider trading, and encourage fairness, efficiency, and transparency in securities transactions. The CMA also creates measures to minimize risks surrounding securities transactions, develop, monitor and manage the securities trading issuance, manage the activities of organizations and their adherence to the rules and regulations of Tadawul, oversee the full disclosure of information associated with securities and issuers, and monitor proxy and purchase requests and public share offerings.

The CMA is headed by a board comprising five professionally-qualified Saudi nationals working full-time. The Royal Order appoints the members, and their salaries and financial benefits are determined by the same. In addition, the Royal Order selects the Chairman and Deputy Chairman, the latter to replace the former in his absence. Any board member or authority should, upon accepting its functions, report to the authority any securities he or his relatives owns and declare any change in them within three days of being informed of the change. Members of the board and the authority's employees are not allowed to take up any profession, including a position in any company, in the government or in private/public institutions. They should also avoid advising companies and private institutions.

2.5.3 The Saudi Stock Market (Tadawul)

The Saudi joint stock companies began in the mid-1930s by the Arab Automobile Company, which established the pioneering joint stock company. Fourteen public companies existed by 1975 and as a result of the rapid economic expansion coupled with the Saudization of some foreign banks capital by the 1970s, large corporations and joint stock banks were established. Investment in shares became common compared to investment in other sectors like real estate. Government awareness of stock was maximized owing to the significant increase in oil revenue and through the privatization program. Consequently, this awareness led to undertaking a comprehensive study of the entire trading system, the development of the stock market and the attraction of Saudi investors to invest in companies' shares.

Nevertheless, the market was informal until the early 1980s, when the government dedicated to regulate the market for trading and establish systems. By 1984, the government established a Ministerial Committee comprising the Ministry of Finance and National Economy and Ministry of Commerce. Added to this, the Saudi Arabian Monetary Agency (SAMA) was established for the regulation and development of market. SAMA is a government body that is responsible for the daily regulations and monitoring of market activities until the establishment of CMA in July 2003 under the CML, Royal Decree No. M/30.

In an attempt to improve the regulatory framework, intermediation in share trading was limited to commercial banks. The Saudi Share Registration Company (SSRC) was set up by the commercial banks in 1984. It provides facilities of central registration for joint

stock companies and handles equity transactions. In 1989, automated clearing and settlement was introduced and by 1990, the Electronic Securities Information System (ESIS) was developed and monitored by SAMA. This was followed by the establishment of Tadawul on 6 October, 2001, which is considered the next generation of securities trading, clearing, and settlement.

Table 2.2
Summary of Saudi Market Statistics 1990- 2011

Year	Number of Transactions	Number of Shares Traded (Million)	Value of Shares Traded (Million RLs)	Market Value Shares* (Billion RLs)	Number of Companies	General Share Price Index* (1985=1000)
1991	90,559	31	8,527	181	60	1,787.70
1992	272,075	35	13,699	206	60	1,888.70
1993	319,582	61	17,360	198	65	1,793.30
1994	357,180	152	24,871	145	68	1,282.00
1995	291,742	117	23,227	154	69	1,367.60
1996	283,759	138	25,397	172	70	1,531.00
1997	460,056	314	62,060	223	74	1,957.80
1998	376,617	295	51,509	160	73	1,413.10
1999	438,226	528	56,579	229	75	2,028.53
2000	498,135	555	56,293	255	76	2,258.29
2001	605,035	692	83,601	275	64	2,430.11
2002	1,033,669	1,736	133,787	281	68	2,518.08
2003	3,763,403	5,566	596,510	590	70	4,437.58
2004	13,319,523	10,298	1,773,858	1,149	73	8,206.23
2005	46,607,951	12,281	4,138,695	2,438	77	16,712.64
2006	96,095,920	68,515	5,261,851	1,226	86	7,933.29
2007	65,665,500	57,829	2,557,712	1,946	90	11,038.66
2008	52,135,929	58,727	1,962,945	925	120	4,802.99
2009	36,458,326	56,685	1,264,012	1,196	128	6,121.76
2010	19,536,143	33,255	759,184	1,325	139	6,620.75
2011	25,546,933	48,545	1,098,837	1,271	145	6,417.73

* At the end of period.

Source: Tadawul - Capital Market Authority.

The table above presents a significant decrease in market capitalization from 2,432 (2005) to 1,226 (2006). The majority of investors lost most of their fortune in Tadawul in the 2007 disaster, which precipitated the intervention of the Saudi government. The market capitalization increased to 1,946 but decreased again in 2008 owing to the drop and rise of

various transactions throughout the years (see Table 2.2). The Saudi government realized the significance of taking actions like issuing CG codes to rescue Tadawul.

2.5.4 The Saudi Organization for Certified Public Accounting (SOCPA)

In Saudi Arabia, the accounting profession developed into its current form only after the passage of SOCPA in 1991. SOCPA is a quasi-independent, professional self-regulatory body, which became the national organization for accountants and auditors in 1991. The objectives of SOCPA are to:

1. Review, develop, and accept standards of accounting and auditing;
2. Establish the required rules for fellowship certificate examination (CPA examination), with the inclusion of professional, practical, and scientific aspects of the audit profession and applicable regulations;
3. Undertake research concerning the accounting and auditing profession and relevant related subjects;
4. Establish a suitable quality review program to ensure that Certified Public Accountants employ professional standards and adhere to the Certified Public Accountants Regulations and its by-laws;
5. Publish periodicals, books and bulletins regarding accountancy and related subjects, and;
6. Participate in both local and international committees and symposia associated with the accounting and auditing profession.

SOCPA consists of technical committees that prepare general rules that organize the profession. These committees comprise experts and members with high specializations,

including university staff and companies' and government departments' practitioners. The table below lists the names of the committees and their constitutions:

Table 2.3

The names of committees and their members' background and their numbers.

Name of Committee	Professional	Academic	Government	Companies	Total
Accounting Standards	4	4	2	3	13
Auditing Standards	4	4	2	1	11
Professional Ethics Examinations	3	3	1	2	9
Quality Review	3	4	-	1	8
Training	4	3	-	2	9
Public Relations	3	3	1	1	8
Consulting Services	3	1	2	4	10
Total	3	2	1	2	8
	27	24	9	16	76

Source: SOCPA

Private and public traded enterprises are legally mandated to conduct annual audits. National accounting and auditing standards, ethical codes, and quality review programs for audit companies and professional fellowship examinations were established, and SOCPA was granted licensing, disciplinary, and monitoring authority over its members. Prior to 1990, no national organization for accountants and auditors existed of any size or influence. MCI was granted the responsibility of certifying public accountants. Public accountants' qualifications at that time ranged from substantial experience to no experience (Al-Amari, 1989; Al-Harkan, 2005).

2.6 Accounting and Auditing Development in Saudi Arabia

The profession of accounting and auditing has a key role in the development of countries and specifically, economic development. Saudi authorities have paid special attention to enhance the auditing and accounting profession since 1930. The pioneering official regulation, established on 15/07/1391H (6 September, 1931), mandated the maintenance

of accounting records (MCI, 2014). By 1395H (1974), CPA enumerated the reasons to set up a higher committee to oversee the profession.

In addition, academic contributions played a key role in the development of the accounting and auditing profession by facilitating a series of symposia on accounting and auditing development methods in Saudi Arabia with the help of King Saud University in 1401H (1981). This led to the establishment of the Saudi Accounting Association, in collaboration with the King Saud University. The association's role at that time was to develop academic thought by publishing books in accounting and auditing subjects, providing accounting education by holding seminars and conferences, and providing consultancy, services, and studies in accounting and auditing for both academies and government⁶. Other universities in Saudi Arabia, such as King Khaled University, followed suit. The year 1991 marked a transitional period in accounting and auditing practices with the establishment of SOCPA. SOCPA has taken a significant step in developing the accounting and auditing profession in Saudi Arabia by developing the standards of the profession, setting up conferences and symposia, facilitating training courses, investigating inquiries and providing solutions to the issues, attracting experts and academic researchers, and carrying out needed research (SOCPA, 2014a).

With regards to adherence to accounting and auditing standards, registered companies in Saudi Arabia are mandated to comply with the SOCPA-issued accounting standards. For guiding CG, under the supervision of MCI, SOCPA has issued a total of 23 accounting standards and 17 auditing standards as of 3011, along with a number of professional views

⁶ After the foundation of SOCPA in 1991, the Saudi Accounting Association's role was focused only on the publication of bulletins and books in accounting and auditing subjects.

and interpretations of accounting and auditing. SOCPA has employed strict methods in the processing of these standards issuance, guided by international standards including the American, British, and International standards. SOCPA also mandates companies employ international standards that have been neglected in the Saudi local standards. It is notable that in this context, the standards of accounting and auditing recently issued are highly consistent with their matching international standards.

Moreover, SOCPA aims to employ the strategic plan brought forward by the Group of Twenty (G20)⁷; a recommendation that aims to enhance the quality of financial reporting through the employment of the world's single set of high-quality accounting standards. SOCPA technical committees examined the possibility of shifting to international standards and decided to adjust Saudi standards to international standards, according to the methodology, while taking into consideration the Saudi environment in terms of legal provisions, regulations, and technical degree of preparedness to accept the compatibility process (SOCAP, 2014b).

2.7 Corporate Governance Development in Saudi Arabia

Corporate governance in Saudi Arabia emerged with the first official companies' regulation issued by The Company Act (1965). The law comprises rules regulating private as well as public companies, bankruptcy, and government. However, the term "Corporate Governance" and its code became known following the issuance of the CMA of the Saudi

⁷ The Group of Twenty (G20) was founded in 1999 and is composed of finance ministers and central bank governors. The group aims to combine economic systems for developing countries and industrialized countries, and discuss issues linked to the global economy. Its members are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, the Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States of America plus the European Union, which is represented by the President of the European Council and by Head of the European Central Bank.

Code (Corporate Governance Regulation in the Kingdom of Saudi Arabia) on 12 February, 2006. The Saudi code covers three broad parts: shareholders' rights and the general assembly, disclosure and transparency, and board of directors. Saudi-listed companies are mandated to adhere to the code or to justify their non-compliance to the code to the board of directors.

2.7.1 The Company Act

In Saudi Arabia, The Company Act was issued under Royal Decree M/6 on 22/3/1385H (22 June, 1965). The law contains 234 articles and has since experienced many amendments. It contains rules regarding the creation of companies, their governance and bankruptcy. The law is the main authoritative reference for accounting and auditing practices. In particular, articles 123-133 of the law presents; the requirements of accounting regulations and procedures for the annual financial statements of the firm, the relationship between the firm and the external auditor, and the role of external auditor toward the firm's financial statements. Additionally, The Company Act provides some accounting and auditing guidelines and determines the firms' and the accountants' legal basis. The articles within address the fundamental details of formation of a firm, including procedures of registration, minimum capital wanted, number of partners, number of directors and other relevant matters. For instance, articles 175 and 176 provides guidance to the board of directors in their provision of a balance sheet for every fiscal year, a profit and loss statement, and a report concerning the firm's operations and financial standing. Every listed company should, every fiscal year, reserve at least 10 percent of its net profit.

The firm partners may decide to discontinue this reserve when half of the capital reserve is achieved. The law also provides guidance concerning auditing and accounting measurement and procedures (Companies Law, 1965). Although The Company Act is to form part of the accounting regulation in Saudi Arabia, it does not contain any mention of accounting standards (Al-Amari, 1989).

2.7.2 The Code of Corporate Governance

The notion of modern CG was very difficult to understand following its first issuance in Saudi Arabia in 2006. Some Saudi-listed companies disclosed that all the members of the board of directors were independents and none of them executives. This indicated a separation of board of directors and executive managers that affected cooperation in achieving firm objectives. Prior to the issuance of the CG code, Saudi Arabia lacked CG standards; the lack of disclosures and transparency was attributed to this fact (Al-Abbas, 2008).

The CMA issued the CG code consistent with the characteristics of the Saudi market environment on November 12 November, 2006. The CMA is committed to its role in developing the Saudi financial market, increasing its attractiveness to foreign investor. and improving the performance of firms. During that time, the CG code was misunderstood by directors, legislators, stakeholders and the public as whole. As such, several studies have been conducted to clarify the CMA CG code (Al-Hussain, 2009; MCI, 2014).

Specifically, the Saudi CG code enumerates shareholders' rights and the General Assembly in the first part, which comprises five articles covering the rights of shareholders pertaining to access of information, rights related to the General Assembly,

voting rights and dividend rights. The general rights of shareholders are addressed in article 3, which enumerates the rights of distributable profits, rights of attending and participating in the General Assembly, voting rights, rights of supervising board of directors' activities, and rights to inquire and access information regarding the company without prejudicing the interests of the company. Articles 4, 5, 6, and 7 contain the details of rights mentioned in article 3. The second part addresses disclosure and transparency in two articles. Article 8 contains the policies and procedures of disclosure and requires companies to lay down policies, procedures and supervisory rules governing disclosure pursuant to law, while article 9 contains the disclosure of the board of directors' reports and its contents.

The third part of the code sheds light on the board of directors, their functions, responsibilities, and structure in four articles. Article 10 explains the primary functions of the board of directors, such as drawing up the strategies and objectives of the company, determining the suitable capital structure, and establishing and supervising the rules of internal control systems. Article 11, provides the responsibilities of the board of directors, and article 12, explains board formation, including number of directors (which should not be less than three and more than 11). The majority of board members should also be non-executive. In Article 13, enumerates the number and formation of board committees, and article 14 explains the duties of the audit committee. Article 15 contains the responsibilities of nomination and the remuneration committee, and article 16, lists the directors' responsibilities with regard to the preparation and attendance of meetings. Article 17 states that the members of the board can obtain their remuneration in the form of a specific amount, attendance allowance, or percentage of the profit, or they can

combine one or more of the above privileges. The final article, article 18, enumerates the prohibitions to which board members should adhere regarding the following: participating in activities which may likely compete with the company's activities, or obtaining a grant, cash loan, or guarantee from another company. With regard to Saudi companies' CG, a notable lack of research has been dedicated to these practices. A study that stands out was conducted by Abdul Rahman and Al-Janadi (2006), which investigated CG practices in Saudi Arabia and revealed that Saudi companies have some features of international practices of CG in place; for instance, non-executive directors dominating the boards, and the separation of the Chairman and the CEO.

However, board of directors and audit committee among CG regulations are both considered as the first line of defence against decreasing firm performance. Thus, this study attempts to explore the role of the board of directors and its committees as the core of CG mechanisms. The following section will show the role of the board of directors and audit committee according to the Code of CG.

2.7.2.1 Board of Directors

Based on the Code of CG, the board of directors should follow up many tasks such as: approving the strategic scheme and the main aim of the firm and supervising their implementation, this includes: comprehensive strategy, plans, policies, capital structure, financial objectives, annual budget, performance, risks, organizational and functional structure, settling any possible cases of conflict, ensuring the integrity of financial transactions, reviewing the effectiveness of internal control systems and monitoring.

In addition, it ensures the implementation of regulations, such as full disclosure and CG.

Moreover, representing the shareholders, so the eventual responsibility for the firm rests with the board of directors, even if a company sets up committees or delegates some of its powers to a third party such committees. The Code of CG attempts to explain the main responsibilities of the board of directors; however, the company system plays an important role in determining the board's responsibilities toward shareholders and others investors. Generally, the board of directors is responsible for the integrity of financial reporting and the company's performance.

The formation of the board of directors is subject to the following criteria:

- 1- The board of directors should contain at least three members and no more than eleven members.
- 2- The independent members of the board of directors shall not (less than two or one-third) of the members, whichever is greater.e.
- 3- The position of chairman of the board of directors not allowed to be dual with any executive position such as CEO.
- 4- One-third of of the members of the board of directors should be fully independent.
- 5- A member of the board of directors should not act as a member of the board of directors of more than five joint stock companies at the same time.

In addition, the code of CG introduces some articles related to termination of membership regarding members. Moreover, the Code of CG only focuses on the importance of board meetings without specifying the annual number of meetings.

2.7.2.2 Audit Committee

Based on the Code of CG, the board of directors should form an audit committee which includes at least three non-executive members, with at least one of them having expertise in financial and accounting affairs. This committee has several important roles: to supervise and review the firm's internal and external audit procedure, control system, accounting policy, the integrity of financial reporting, disclosure, monitoring management, the recommendation of auditor selection and to remedy conflicts between management and external auditor.

Among other committees such as remuneration and nomination committees and executive committees existed in firms, the audit committee was the only committee delegated by the board of directors to perform certain duties (Al-Moataz, 2003). This meant that it had to perform a large number of functions which led to an impairment of its performance of those functions. In 2007, SOCPA created a committee to evaluate the role of audit committees in Saudi Arabia's listed companies and concluded that there was a lack of clarity concerning the tasks and the functions and duties of audit committees and that their members were not aware of the purpose of such committees (Al-Ghamdi, 2012).

2.8 Summary and Conclusion

This chapter provided the background and institutional environment in Saudi Arabia. In the context of the Saudi institutional framework, significant progress has been noted in terms of the regulatory framework that facilitates a good institutional environment for firms that would, in turn, maximize their value in the country's economy. Additionally, the regulatory bodies are working according to the strategies and policies of the

government in an attempt to enhance the investment environment. As a result, foreign, regional, and local investors are attracted to invest, and this may contribute to Saudi economic development in the Middle East. In terms of the development of accounting and auditing, it is well-documented that serious initiatives are brought forward and employed by the Saudi government, including encouraging firms to adopt and adapt international accounting and auditing standards to suit the Saudi environment. In addition, the Saudi regulatory entities adopt and maintain good CG practices in an attempt to improve firms' values, as these values are improved when the company employs good CG practices. It is, however, evident that the institutional framework associated with accounting, auditing and CG in the Saudi context is still in its infancy.

CHAPTER THREE

FIRM PERFORMANCE AND ITS RELATED THEORIES:

A REVIEW AND SYNTHESIS OF THE LITERATURE

3.1 Introduction

The preceding chapter provided a brief background to Saudi Arabia and its institutional environment, regarding the regulatory organizations, legal system, development of accounting profession, development of CG mechanisms and highlighted information in respect of the nature of ownership structure in Saudi Arabia. As illustrated, the aim of this study is to understand the CG mechanism and firm performance in Saudi Arabia. Previous studies have shown that the incentive to improve firm performance comes from good CG mechanisms such as characteristics of board of directors, characteristics of audit committee and ownership structure. A vast majority of previous research tries to seek a great explanation of what characteristics that can enhance firm performance but there are other characteristics that were not examined in these researches. Thus, this chapter provides a comprehensive review of the issues related to the relationship between CG mechanisms and firm performance.

The chapter is organized as follows: section 3.2 presents theories (agency theory, stewardship theory and resource dependence theory) that are associated with firm performance, section 3.3 displays firm performance measurement instruments such as market-based measurement (Tobin's Q) and accounting-based measurement (ROA & ROE) and section 3.4 looks at how CG might be defined, section 3.5 reviews CG mechanisms (board of directors effectiveness, audit committee effectiveness and

ownership structure). In addition, section 3.6 provides a summary and conclusion of this chapter.

3.2 Theories Associated with Firm Performance

There are various theories that provide some rationalisation for the conflicts of interest present between a number of contracting parties, such as corporate management, shareholders and stakeholders, and how such parties could impact the overall performance of the firm (Jensen & Meckling, 1976). Such theories include agency theory, stewardship theory, and resource dependence theory, and, all of which have been widely adopted in regard to examining firm performance with CG. However, there is no individual or wide-ranging theory that describes the concerns impacting firm value in the marketplace. Moreover, the argument that is commonly posed is that there is a need for a multi-theoretic approach to gaining insight into CG tools (Daily *et al.*, 2003; Ruigrok *et al.*, 2006). In mind of this research, there are three pivotal theoretical standpoints relating to agency theory, as the key theory, are utilised in order to postulate the link between firm performance and CG tools in the context of the KSA.

3.2.1 Agency Theory

Agency theory is commonly adopted in both economic and financial researches, as noted by various scholars (Eisenhardt, 1989; Fama, 1980; Fama & Jensen, 1983; Jensen & Meckling, 1976). Agency theory centres on the link between principal, i.e. shareholder, and agent, i.e. decision maker or manager, with the theory submitting that both principal and agent are recognised as making the most of their own capacities and in pursuing their own agenda may have conflicting interests between them (Fama & Jensen, 1983; Jensen

& Meckling, 1976). Berle and Means (1932) further state that, when management are not monitored by shareholders, the conflict of interests and separation seen as a consequence between management and shareholders in the organisation could result in agency problems; however, upon the maximisation of management's self-interests—notably at the cost of firm success and effectiveness—the interests of shareholders may be compromised. Regardless, however, agency theory postulates that a firm comprises a set of contracts between the firms' resource providers or firm owners (principals) and management (agents). The role of management is to ensure the resources are both controlled and utilised in the interests of the owners. Agency costs may be considered as the value loss to owners, arising when management do not act in accordance with the best interests of the owners. For instance, if management pays himself an extreme wage, negotiates deals with other organisations under his supervision, or otherwise capitalises negative net-present-value projects (Jensen & Meckling, 1976; McConnell & Servaes, 1990).

So as to ensure overall effectiveness during the contracting approach, both parties, notably agents and principals, need to negotiate the contracting costs, as highlighted by Kren and Kerr (1993). It is widely recognised that the implementation of improved CG practices is expected to enhance the overall observation of management, and further decreasing issues in terms of data asymmetry. The most effective CG mechanism centered on the supervision of firm management on the behalf of investors is the presence of a board of directors, audit committee, and ownership structure. Markedly, through the board of directors, management will be guided in acting on behalf of shareholders. This ensures the transparency of financial reporting, with good governance of the business subsequently

impacting the market value. There is a wealth of literature suggesting that an efficient board will reap improvements in the monitoring of management, and will reduce issues surrounding data asymmetry; in turn, this enhances market firm value. Board of directors' efficiency in regard to its characteristics has been noted in a number of studies, such as in regard to independence (Bauer, Frijns, Otten & Tourani-Rad, 2008; Hillman & Dalziel, 2003; Hermalin & Weisbach, 1988; Zainal Abidin, Mustaffa Kamal & Jusoff, 2009), meetings (Karamanou & Vafeas, 2005; Vafeas, 1999) and financial knowledge (Chen, Cheng & Hwang, 2005; Kesner, 1988; Kimberly & Evanisko, 1981; Switzer & Huang, 2007).

The second CG mechanism is that of an audit committee, which is one of the key instruments centered on the processes of risk and financial decision making. The key objective of the audit committee is to monitor the firm's financial reporting process, to review financial reports, to implement internal accounting mechanisms, to conduct the auditing process, and to supervise risk management practices (Klein, 2002). The audit committee is, potentially, one of the most fundamental subcommittees of the board of directors owing to its particular and clear role concerning the safeguarding of shareholders' interests in regard to financial control and oversight (Mallin, 2007). Markedly, there is much literature advocating that an efficient audit committee is intended to enhance management monitoring and decrease data asymmetry issues; subsequently, these help to enhance the value of the firm in the marketplace. Audit committee characteristics' efficiency, as noted through prior researches, including size (Raghunandan, & Rama, 2007), independence (Anderson, Mansi & Reeb, 2004), meetings

(Abbott & Parker, 2000; Sharma, Naiker & Lee, 2009) and financial expertise (Chan, & Li, 2008; DeFond, Hann, & Hu, 2005; Naiker & Sharma, 2009).

In consideration to agency theory, which is concerned with dealing with the methods by which corporations' finance suppliers safeguard themselves in terms of achieving return on investment (Shleifer & Vishny, 1997, p. 737), it is emphasised that both market-based and institutional aspects encourage the self-interested controllers of a firm to base decisions on the maximisation of firm value for their owners (Denis & McConnell, 2003). Moreover, it has been acknowledged that ownership concentration is one of the key CG characteristics impacting the potential of a firm's agency costs; this is commonly viewed from the standpoint of conventional accounting and financing models. One of the incentives seem to be in the alignment of interests between directors and shareholders in the form of insider equity ownership (Jensen & Meckling, 1976).

3.2.2 Stewardship Theory

As noted previously, agency theory poses the view that the interests of shareholders necessitate safeguarding through a distinction made between control and ownership. On the other hand, Stewardship theory suggests that shareholders' interests and performance are exploited through sharing the responsibility of board members. Commonly, the view is held that directors are concerned with attaining high performance and are therefore positioned to utilise a significant degree of discretion when acting for the benefit of shareholders (Donaldson & Davis, 1991). One of the simplest postulations made by the theory is that the behaviours and motives of directors are wide-ranging and varied beyond

self-interest, which forms the basis for considering that conflict of interest may not be the sole characteristic of the distinction between control and ownership.

When adopting the Stewardship theory, there is a preference for insider-dominated boards owing to their access to superior information, dedication to the organisation, detailed knowledge, and technical expertise. The theory suggests that shareholders can expect to amplify returns when the business structure enables adequate managerial control (Muth & Donaldson, 1998). In line with this theory, significant levels of insider directors are linked with good access to data, thus resulting in good decisions and, accordingly, good firm performance. On the other hand, a low degree of inside directorship may be linked with low data access, thus causing insufficient decision making and, as a result, poor firm performance (Nicholson & Kiel, 2007).

3.2.3 Resource Dependence Theory

Resource dependence theory adopts a more strategic perspective in regard to CG, viewing the organisation's government body as the tie between the critical resources required to maximize firm performance, and the organisation itself (Pfeffer, 1972, 1973; Pfeffer & Salancik, 1978; Tricker, 2009). Markedly, in terms of definition, thus far, no universally accepted definition has been postulated in terms of what is considered an important resource (Nicholson & Kiel, 2007). However, sociologists usually direct more emphasis to three types of relation: those the board give to the business elite of a nation (Useen, 1984); capital access (Stearns & Mizruchi, 1993); or those to competitors (Mizruchi, 1996). As a potential fundamental firm resource, the board is recognised as an enabler of strategy creation and application (Baysinger & Butler, 1985).

It is suggested through the theory that directors with a link with outsiders, notably through multiple directorships or cross-directorships, are more likely to have access to external resources, as noted by Muth and Butler (1985), which are relevant in terms of ensuring firm performance to be improved. In view of this theory, a high-level relation with the external environment is linked with a good degree of access to resources, and thus, sound firm performance. On the other hand, a low degree of link to the external environment may be related to a low level of resource access and, as a result, low performance by the organisation (Nicholson & Kiel, 2007). Nevertheless, such a perspective into the roles and responsibilities of the board remain questionable as it has the ability to make use of firm resource for its own interests. Regardless, however, there is much acceptance of this theory in the contexts of sociology and organisational theory.

When analysing closely the aforementioned theories, one of the most fundamental concerns is that of overlapping roles. For instance, an independent board delivers a tool for shareholders in terms of their ability to preserve and maintain the control associated with ownership (agency theory). When supervising the management, the board is driven to behave in line with stewardship theory, meaning corporate assets are managed responsibly. When there are high-level links between the board and external resources, the board acts as a co-optation mechanism for those firms aiming to achieve access to external resource (resource dependence theory) (Hillman & Dalziel, 2003; Nicholson & Kiel, 2007; Roberts, McNulty & Stiles, 2005). Accordingly, to the fact that these theories are key in governance studies, this research adopts the perspectives of these three theories, i.e. agency theory, stewardship theory and resource dependence theory, with the aim of

hypothesising the links of the board of directors, audit committee and ownership structure, alongside firm performance, in the specific context of the KSA.

3.3 Firm Performance

Researches carried out previously have utilised various firm performance instruments, with such tools commonly grouped into two different forms, namely market-based and accounting-based performance. Market-based performance takes into account stock prices, which highlight the firm data's economic value. Tobin's Q is the most commonly utilised measure for reflecting market-based performance. In regard to the second, accounting-based performance centered on historical results, such as earnings, operating profits, and operating revenues, with the most commonly utilised, as shown in the literature, seem to be Return on Assets (ROA) and Return on Equity (ROE).

3.3.1 Market-based Measurement (Tobin's Q)

Stock returns are taken by Tobin's Q with the aim of assessing firm performance, which is inclined to highlight expected future performance as opposed to actual firm performance (Joher, Ali, Shamsheer, Annuar & Ariff, 2000; MacAvoy & Millstein, 1999). Researches carried out previously utilise Tobin's Q with the aim of measuring firm performance as a proxy for business value, as noted by various scholars (Aljifri & Moustafa, 2007; Dogan *et al.*, 2013; McConnell & Servaes, 1990; Morck, Shleifer & Vishny, 1988; Vafeas, 1999). Moreover, Tobin's Q is assessed as the market value of equity plus the book value of the debt, divided by the book value of the total assets (Aljifri & Moustafa, 2007; Baek, Kang & Park, 2004; Bauer, Guenster & Otten, 2004; Weir, Laing & McKnight, 2002).

3.3.2 Accounting-based Measurement (ROA & ROE)

The view is posed that accounting-based performance tools are more efficient than market-based ones (Sun & Tong, 2003). This is owing to the fact that, when the share market displayed a lack of efficiency, share prices are less likely to reflect all data available. On the other hand, however, the accounting-based performance measure is more keenly linked with financial survivability as opposed to share market value, thus enabling the performance assessment of publicly-traded organisations. The first of these accounting-based measures is ROA; this may be described as net income divided by total assets' book value (Alzharani *et al.*, 2011; Anderson & Reeb, 2003; Bhagat & Bolton, 2008; Maury, 2006; Yermack, 1996). The ROA highlights the overall efficiency of assets utilisation by the firm in terms of improving the wealth of shareholders. Nevertheless, if there are low revenues, ROA will also be low; this will also be the case if booked assets are unproductive or expenses are high. ROE is the second of the accounting-based performance measurements, and is described as net income divided by the equity of the shareholder (Alzharani *et al.*, 2011; Anderson & Reeb, 2003; Arslan, Karan & Eksi, 2010; Maury, 2006). This is an all-inclusive measure of performance, highlighting expropriation in the income statement as well as the balance sheet.

3.4 Corporate Governance Definition

The term “Corporate Governance” was not used in early times, but the practice of CG to response to corporate failure and recession is ancient (Vinten, 1998). For example, US Wall Street crash in 1929, the Securities Act 1933 was issued; US Corporate Scandal (e.g. Penn Central) 1970s and the NYSE rule of establishment of audit committee in 1997; UK

Robert Maxwell MMC, BCCI, Polly Peck 1990/91, the Cadbury Report 1992, Greenbury 1995, Hampel Report 1998, Turnbull Report 1999 were issued; Asian Financial crisis 1997/98 the OECD Principle of CG 1999 issued; and Enron, WorldCom, Tyco, Adelphia, Global Crossing 2001/02, the Sarbanes-Oxly Act 2002 was issued and Australia HIH, One Tel 2001/02, the Australia Corporate Law Economic Reform Program 2002. In Malaysia, the East financial crisis in the middle of 1997, the code of CG become effectively in January 2001. Also, Saudi Stock Exchange's collapse in March 2006, CMA issued the Code of CG on 12/11/2006.

However, the term has become common as an interdisciplinary topic which is discussed in economics, finance, and strategic management and accounting literatures. It has also become a worldwide issue even to major economic powers such as the USA and UK.

Nowadays, the CG is considered a fancy term for various influences that determine what a corporation does or does not do or should or should not do. Subsequently, a report by the American Law Institute was released in 1984 on the principles of CG in the 1980 the term CG was scarcely used in academic researches and books (Tricker, 2009). Nowadays, the term is being extensively used and debated within the academic and business worlds (Brown et al., 2010).

What does CG mean? The term CG has come to mean two things: First: the processes by which companies are directed and controlled. Second: a field in economics, which studies the many issues arising from the separation of ownership and control (Shleifer & Vishny, 1997). The definition of CG varies somewhat depending on the context in which the definition is used in general. The first broad survey of CG was by Shleifer & Vishny

(1997). Several surveys followed, including Holmstrom and Kaplan (2001); Becht, et al. (2003); Denis & McConnell (2003). Tirole (2001) provides an analytical review. Claessens and Fan (2002) survey the literature on Asia CG.

The Cadbury Report (1992, P.14) defined CG as: “...*the system by which companies are directed and controlled*”. This definition is narrow definition of corporate governance because it focuses on the monitoring and control of companies for the benefit of stakeholders.

Shleifer and Vishny (1997, P.737) defined CG as: “...*the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment*”. Also, this definition is narrow because it emphasizes the importance of stakeholders’ activism and ignored other important types of activism.

The role of shareholders and the responsibilities of the board of directors have received most attention in the CG literature. The OECD, (1999 P.11) offered CG as:

A set of relationships between a company's management, its board, its shareholders and other stakeholders. Corporate governance also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined.

This definition is broader because it takes into account the rights of shareholders and stakeholders as well as the responsibility of the board of directors. Further, this broader definition views companies as being responsible to the whole of the society.

Monks and Minow (2004, p.1) defined CG

A set of the relationship among various participants in determining the direction and performance of corporations. The primary participants are the shareholders, the management and the board of directors.

This definition of CG has taken a relatively sharp focus when it based on the activities of the shareholders, the board of directors and management.

Tricker (2009, P.38) adopted Clarks' (2004) definition to define CG in the following way.

Corporate governance is about the way corporate entities are governed” and “corporate governance is about the exercise of power over corporate entities”. This definition considered the widest because it recognizes the corporate governance needs to involve all and every element that can affect the exercise of power over corporations.

However, increasing of corporate performance by improving the achieving of sub-objectives, CG can be defined as the legal system by which companies are directed and controlled (Cadbury, 2000; Ammer Holland, Smith & Warnock, 2008; Roosenboom & van Dijk, 2009). CG may eventually increase corporate performance by improving the attainment of sub-goals, such as the efficiency of strategic decision making and low capital costs (McKinsey & Institutional Investors Inc., 2003).

To make sure that CG is not an abstract goal, but exists to serve corporate purposes by providing a structure within which shareholders, directors and management can pursue most effectively the objectives of the corporation in the long-term interests of the shareholders, management and board of directors must take into account the interests of the corporation's other stakeholders (Business Roundtable, 1997; Hampel, 1998).

Recent studies have pointed out that the relationship between CG and firm performance. The good performance of the companies attracts the investments (McKinsey & Institutional Investors Inc., 2003). So many companies around the world try to improve their performance for the purpose of getting fund from investors in order to expand and grow. On the other hand investors need to have confidence that the company is being well

managed and will continue to be profitable investments (McKinsey & Institutional Investors Inc., 2003). In this case the investors look to the published annual report, accounts, share prices of the companies and other information releases that the company might make.

However, although the annual report may give a reasonably accurate picture of the companies' activities and financial position at that point in time, there are many facts of the company that are not effectively reflected in the annual report and accounts. It can be observed that the annual reports, accounts and the share prices in the market seemed fine for most of companies; still there have been a number of high-profile companies' collapses such as Enron and Worldcom in USA, Al Mawashi Al Mukairish Co. and Bishah Agriculture Development Co. in the Kingdom of Saudi Arabia. These events would affect us all. So many questions have appeared. Why have such collapses occurred? What should be done to prevent such collapses happening again? How can investor confidence be restored? The answering for all of these questions is linked to CG.

For the purpose of this study, CG can be defined (consistence with the code of CG in Saudi Arabia) as a system governed by a set of legislation and the specific rules that govern and regulate the relationship between company's management and shareholders in order to monitor and control for the purpose of quality assurance in performance, confirm the equal and fair treatment and define the responsibilities and accountabilities of the board of directors (CMA, 2014).

3.5 Corporate Governance Mechanisms

It is theoretically well-established that adopting better CG practices is expected to improve the monitoring of management and reduces information asymmetry problems, steward the resources and link the company to the essential resources that it needs to maximise performance. There is a significant literature employing this framework that links board of directors' characteristics, audit committee characteristics and ownership structure with firm performance and value.

3.5.1 Board of Directors Effectiveness

The board of directors is assigned a number of key responsibilities and obligations, including establishing aims and goals, and overseeing and controlling the activities and operations of the organization, which is pivotal to the decision making process within the organization (Fama & Jensen, 1983). In line with the agency theory, the key responsibilities of the board of directors are centered on management monitoring in regard to shareholders. Moreover, a critical role is adopted by the board of directors, with focus directed towards the monitoring of shareholders' best interests; thus, the controlling role is essential and therefore needs to be followed by the service role. Despite the fact that the majority of management related decisions are assigned to managers, it remains that the board of directors is the main point of control through carrying out the ratification and monitoring of significant managerial decisions (Fama & Jensen, 1983). Accordingly, agency theory directs focus onto the decision making process in regard to the way in which the board monitors management in an attempt to circumvent issues between shareholders

and management. In order to improve the motivation of the board to supervise management, agency theory implies management ownership through aligning shareholder and manager interests, non-dual leadership and a higher proportion of external directors of the board in order to improve board independence (Muth & Donaldson, 1998).

In contrast with agency theory, the Stewardship Theory postulates the view that managers are stewards whose actions are allied with the aims of their shareholders (Donaldson & Davis, 1991). The theory further implies that emphasis needs to be placed on a different driver of motivation for management one stemming from organizational theory. Management are recognized as being loyal to the organization and interested in achieving high levels of performance (Muth & Donaldson, 1998). Moreover, the dominant motive, which places emphasis on management fulfilling their job roles, is concerned with the inclination of management to perform to excellent standards. In particular, managers are recognized as being driven by the need to achieve, garner internal authority and satisfaction, and thus achieve recognition from staff and management. Accordingly, managers have a number of non-fiscal drivers (Turnbull, 1997).

Furthermore, the view is postulated through the theory that a business needs a structure that permits the achievement of effective harmonization between owners and management. In the context of leadership within the organization, the situation is achieved more effortlessly if the board's chairperson is also the CEO of the organization. Such a structure will aid in achieving high levels of performance to the degree that the CEO employs entire authority over the business, with the CEO's role unchallenged. As such, the expectations centered on corporate leadership will be clearer and more consistent, not only for the management but also for all individuals on the board. Accordingly, it may be stated that there is a need to

ensure certainty in terms of who is responsible and who has authority over certain issues. The business will garner numerous advantages centered on the unity of direction, as well as those associated with control and command.

As advocated by the resource dependence theory, the main objective of an organization's board of directors is to act as a co-optation instrument for identifying access to external resources in order to achieve improvements in terms of business performance (Johnson, Daily & Ellstrand, 1996; Pfeffer, 1972, 1973). This theory further implies that the board's role needs to ensure involvement in corporate strategy (Zahra & Pearce, 1989); thus, the board is recognized as being a strategy formulation/implementation facilitator (Baysinger & Butler, 1985). Moreover, the theory postulates that directors who have a link with outsiders are more likely to achieve access to other sources and means (Muth & Donaldson, 1998).

Evolving from traditional family-owned companies, founded firms usually do not like openness in the firms' practices and they continue to be run by their founders (Ow-Yong & Cheah, 2000). However, the performance of the business and the characteristics of the board are more subject to on-going review, particularly when there is a key legislative change or when codes of best practice are issued or suggested. It has been demonstrated by Cicero *et al.* (2010) that organizations within the USA permit target board panel of changes to board. Moreover, they established that, upon the change of the contracting and economic environment, businesses are able to quickly modify their boards in line with such changes. Importantly, their findings provide strong support for the idea that the structure of the board is recognized by all involve in the firm's nexus of contrasts as being critical to organizational value. In order to ensure the sound performance of organizations, there is

the need to take into account the board of directors' characteristics, which are able to influence the capacity of the firm to operate effectively, with consideration directed towards different guidelines and codes of contract, which could highlight accountability and compliance. These characteristics include the existence of Royal family members on the board, board size, board's independent, board's meetings, board's financial knowledge, CEO duality and multiple directorships.

According to Hawkamah and IFC survey of 2008, around 49% of listed companies in Middle East and North-African (MENA), such as that of Saudi Arabia, consider the responsibility for CG policies to the board—in-line with good practice. But, the role of the board is often misunderstood in the MENA region. According to the survey, 90% of MENA banks and listed companies stated that the board, and not management, was responsible for setting corporate management, which is contrary to the good practice that management develops, and the board reviews and guides corporate strategy.

The following subsections highlight the individual characteristics of the board of directors including the board of directors' effectiveness score.

3.5.1.1 Board Royal Family Members

In specific regard to the agency theory, both agents and principals, i.e. decision makers and shareholders, are recognized as optimizing their own utilities, which is a view recognized by Jensen and Meckling (1976) and Fama and Jensen (1983). Board Royal family members (as decision makers and owners) closely oversee management, which helps to enhance firm performance.

Researches carried out previously deliver evidence that a group encompasses particular characteristics, such as ethnicity, for example, plays a key role in much of the country's political and socio-economic environment. For example, Che Ahmad *et al.* (2006) examine the effect of the major ethnicity groups in Malaysia on the choice of auditor among Malaysian publicly-listed companies. They found that the ethnic groups have a substantial influence on the auditor selection process. In this same vein, Richard (2000) examines the links between cultural (racial) diversity, firm performance and business strategy within the banking sector. In an attempt to measure firm performance, he utilized three different methods, namely market performance, productivity and ROE. The findings highlight the fact that cultural diversity has positive links with performance. Moreover, Richard *et al.* (2013) find that participative strategy-making positively mediates the association between racial diversity in management and firm performance, as measured through ROA.

The view has been postulated by Abdul Rahman and Mohamed Ali (2006) that provide support validating the belief that disclosure and accounting practices are a function of the nation's cultural heritage and values, which impact attitudes towards business-related fraud. On the other hand, however, no impacts were recognized in line with Malay directors' characteristics on earnings management, with the view put forward that the presence of Malay directors on the board of the firm and on the auditing committee could hinder opportunistic earnings management.

In the Middle East region, one of the most common types of firm organization is that of Royal family ownership or Royal family controlled companies. In line with a paper documents by Thomson Reuters, all Arab states have made investments in publicly-listed companies amounting to approximately US\$319 billion. The Royal families within the

Arabian domain directly control in excess of US\$240 billion of investments in publicly-listed firms, therefore bettering sovereign wealth funds and government institutions (Zawya, 2013). In the context of Saudi Arabia, Royal families are known to have control of approximately 10 percent of all board seats amongst listed companies.

This research poses the view that there may be circumstances where a number of individuals are seen to be more powerful than others, meaning that some individuals with a greater degree of power impact the actions and views of others in such a way that it gets things done (Clark, 2004). A number of the Royal family members are assigned positions on the board and act as managerial associates, thus meaning they oversee management very carefully, which helps to reduce the potential of wrongdoing and poor management (Al-Ghamdi, 2012). Accordingly, there would be an increase in the value of the firm.

Based on the resource dependence theory, the existence of Royal family members on the board of directors exerts control over their environment by co-opting the resources needed for their firms to survive. Further, Royal members establish links with the external environment due to their family power in the government. They also can be a source of timely information for executives. It is easier for Royal family members as they descend from powerful families in the country to establish contacts and raise funds. These circumstances are believed to enhance firm performance and increase returns to shareholders.

3.5.1.2 Board Size

As has been detailed in the Saudi Code (2006) Part four, Article 12 Paragraph (a), referring to the size of boards: “*articles of association of the company shall specify the*

number of the Board of Directors members, provided that such number shall not be less than three and not more than eleven". Thus, the absolute number of directors is recognized as an essential aspect of efficient governance (Pearce & Zahra, 1992). Despite the fact that various theory-driven justifications imply a link between board of directors' size and firm performance, the literature, on the other hand, delivers no agreement in regard to the direction of such a link (Dalton, Daily, Johnson and Ellstrand, 1999; Kiel & Nicholson, 2003).

Agency theory poses the view that the part played by non-executive directors as overseers of the actions and performance of management (Fama & Jensen, 1983) is not dependent and also is not weakened by the CEO (Weisbach, 1988), with the role also acting as a positive power over the decisions made by, and the deliberations of, directors (Pearce & Zahra, 1992). The resource dependence theory also supports the view that firms are afforded links to the outside environment through non-executive directors as a result of their contacts, expertise and standing. With this view noted, Spencer (1983) implies that non-executive directors commonly consider themselves to be advisories as opposed to a decision maker, meaning they will be listened to and influential, despite the fact that it might not be their role to truly introduce policy (Haniffa & Hudaib, 2006).

The size of the board impacts its overall capacity to operate efficiently, with smaller boards commonly seen to be less efficient in terms of obtaining fundamental sources, such as external funding, their budget amount, and leverage from an environment, as highlighted by Alexander, Fennell and Halpern (1993); Goodstein, Gautam and Boeker (1994); Pfeifer (1972, 1973). This opinion falls in line with the report by Birnbaum (1984), in which that environmental uncertainty (volatility and a shortage of information) can result in a larger

board size. In such an instance, the size of the board could prove to be a measure of the capacity of a firm to establish environmental links to secure critical resources. This will be associated with greater levels of firm performance (Alexander *et al.*, 1993; Goodstein *et al.*, 1994).

Those boards of a larger size are recognized as showing diversity in terms of their backgrounds, expertise and skills, which can generate a greater abundance of ideas that can provide high levels of performance (Brown *et al.*, 2011). Pearce and Zahra (1992), accord that larger boards provide advice and guidance in relation to the firm's strategic options. Moreover, boards of a larger size have a greater capacity to overcome problems, particularly in larger firms. The ability of the board to perform effective monitoring increases with the addition of more expert directors, all of whom can contribute in terms of offering efficiency in their supervisory duties. The reluctance amongst management to control will be seen to increase with larger boards owing to the fact that it is more problematic for them to control and overshadow larger boards (Muth & Donaldson, 1998; Pfeifer, 1972, 1973; Provan, 1980; Zahra & Pearce, 1989). Representing shareholders' interests is improved with a larger board, as recognized by Dalton *et al.* (1999). Reviewing management's actions and the ability to do so will be increased with a larger board (Kiel & Nicholson, 2003). The meta-analysis of Dalton *et al.* (1999) is seen to support the view that board size can be linked positively with firm performance.

On the other hand, however, despite the fact that a number of researchers have failed to achieve consensus on the view that better performance can be achieved through a larger board, a number of researches suggest a negative link between board size and corporate performance (Chen & Zhou, 2007; Conyon & Peck, 1998; Yermack, 1996). For example,

Amran and Che Ahmad (2009) find that board size does not have a strong relationship with firm value. Overall, smaller boards are recognized as being more efficient in the decision making process (Yermack, 1996), as well as in their promotion of decision making, with governance codes commonly specifying that the board must be kept to a reasonable size. The view is postulated by Jensen (1993) that a board needs to have seven or eight people in order to achieve good effectiveness and good control of the CEO: smaller boards are more likely to achieve consensus on a certain result.

Boards that are viewed as overly large are recognized as causing issues in terms of the efficient coordination of all members in terms of management monitoring (Chaganti, Mahajan & Sharma, 1985; Jensen, 1993; Zahra & Pearce, 1989). As such, a greater period of time will need to be directed towards achieving consensus and making a decision owing to the problems of bringing everyone together for such deliberations (Denis & McConnell, 2003; Goodstein *et al.*, 1994). Large boards are recognized as being less likely to become involved in strategic decision making and inhibited strategic change through reorganization (Goodstein *et al.*, 1994; Judge & Zeithaml, 1992). In the case of large boards, it is considered that these can be influenced easier by top management owing to the fact that larger boards are commonly more contentious, more diverse and more fragmented (Goodstein *et al.*, 1994).

It is claimed by Alexander *et al.* (1993) that CEOs could garner benefits in power relations with members of the board, such as through ‘coalition building, selective channeling of information, and dividing and conquering’. Such a view is seen to go against Ocasio (1994)’s suggestion that ‘the stability and cohesiveness of the governing coalition under the CEO can best be contested when the number of directors on the board is large’. With

such a view in mind, it can also be suggested that a board of a larger size is more likely to create more unusual political alliances that challenge the CEO and take control over the organization. Moreover, it is also considered that a large board also restricts the potential of the CEO to manipulate and achieve social influence in order to maintain power (Shen & Chih, 2007).

The study carried out by Cicero *et al.* (2010) provides support for the view that American firms chase target board structures, and do so at economically meaningful rates. Through the application of a wide-ranging panel of changes to board structure for the period spanning from 1991 to 2003, the authors find that such changes are frequent, with roughly two-thirds of firms changing in board size within a two-year period. They further estimate that a target board structure for all firm-years based on present theory, and accordingly establish that firms close approximately 45 percent of the void between their estimated and actual target board size during this two-year period. The change rate is positively linked with the advantages of ensuring efficient boards. Changes recognized in board size, in whichever direction, are coherent with the search of an economically effective target, thus implying that the pressures to implement boards with the recommended elements could decrease the levels of effectiveness.

In the context of GCC countries, the board size of different companies changes from 8.5 in Qatar and 6.7 in the UAE (Binder, 2009). Through the completion of a local research, namely that of Al-Abbas (2009), the link between board size and earnings management amongst Saudi-listed companies was analyzed for the period spanning 2005–2007. He finds that, with a larger board of directors, there is a lesser chance of earnings management. Moreover, the study of Al-Ghamdi (2012) establishes that there is a negative

association between earnings management and board size. This result is seen to be in line with the view that larger boards are more effective in terms of controlling the determined actions of top management (Zahra & Pearce, 1989).

3.5.1.3 Board Independence

One key aspects of good CG is director independence owing to the fact that this facilitates the board in properly fulfilling its legal obligation to oversee management and to safeguard the interests of other parties, namely the shareholders. However, this current insight is somewhat limited in terms of evidence. The board of directors is commonly made up of executive directors and non-executive directors: the former are management and CEOs who adopt the role of directors on a full-time basis and management on a part-time basis; the latter, on the other hand, are independent directors and non-independent directors, none of whom are full-time directors. It is considered that the independence of non-executive directors is fundamental if they are to be efficient overseers (Block, 1999; Brown *et al.*, 2011). Independent directors do not play a role in the management and business of the company, and also have no link with any other directors. As such, independent directors need to be independent from a controlling shareholder and from management. Importantly, directors with a lack of management-centered independence have problems in exercising independent judgment, which ultimately puts at risk the interests of shareholders (Hermalin & Weisbach, 1988).

In governance codes, there is the provision of guidance, which is centered on how independent directors can be identified. The concept and criteria of an independent director has become more stringent with the passing of time, with the background,

experience and length of time taken into account in regard to every individual. In this regard, the Saudi Code (2006) Part four, Article 12, Paragraphs (C) and (E) centre on board independence, with Paragraph (C) stating that, “*The majority of the members of the Board of Directors shall be non-executive members*”. Furthermore, Paragraph (E) also notes that, “*The independent members of the Board of Directors shall not be less than two members or one-third of the members, whichever is greater*”.⁸ Nevertheless, it remains that there is no particular balance in regard to the board and its independence. Accordingly, the board’s non-independent directors could constitute two-thirds of the members (Al-Abbas, 2008; Combined Code, 2003).

The agency theory shows that board independence facilitates the restraining of self-interest pursuits, thus helping to decrease agency costs and opportunities for fraud (Fama & Jensen, 1983). Board independence and the extent of such is directly linked with its overall composition. Accordingly, the assumption is made that the board becomes more independent with a greater number of non-executive independent directors (Hillman & Dalziel, 2003). Nevertheless, there are varied findings in terms of the link between board independence and firm performance. In addition, the view has been asserted by Abdullah (2004); Finegold, Benson and Hecht (2007); Rashid *et al.* (2010) that there is a great deal of variation between findings in regard to the impact of greater board independence on firm performance.

⁸ Resolution number (1-10-2010) Dated 30/3/1431H (16/3/2010) amending the definition of ‘independent member’ in paragraph (b) of Article 2 to include as infringements of independence the ownership of 5% or more of the company or its group by the member of the board of directors or representative of a legal entity which owns 5% or more of the company or its group. This amendment is starting from the date 1/1/2011.

A number of empirical studies have shown that there is a strong positive link between board independence and firm performance. For example, Amran and Che-Ahmad (2009; 2010) find that board independence does a strong relationship with firm value. Zainal Abidin *et al.* (2009) recognize that a larger number of independent non-executive directors on the board has a positive effect in terms of the performance of the firm. This is believed to be owing to the fact that independent directors tend to show greater diversity in terms of their attributes, background, characteristics and expertise, which could ultimately enhance the decision making and processes of the board, as well as firm performance. It has also been recognized by Uadiale (2010) that there is a strong positive link between board independence and performance. Cicero *et al.* (2010) show evidence that firms in the US strive for target board establishment, and that they do so at convenient costs. By employing a holistic policy of change to the board's formation from 1991-2003, they find that these changes are recurring, with almost two-thirds of the organizations changing freedom in a period of two years. They foresee a target board formation for every firm-year dependent on the present-day theory and come to know that firms bridge around 63 percent of the gap between the real and estimated target board formation in two years. The degree of change is confidently linked to the merits of forming result-oriented board. Explicit changes in the board's freedom in any direction are in line with the endeavors of an economically beneficial target, implying that pressures to acquire boards with these features may decrease progress.

In the context of the USA, Byrd and Hickman (1992) have established that, the larger percentage of non-executive directors, the greater the response of the stock market to the firm's tenders offers for other firms. Furthermore, additional support is garnered by Rosenstein and Wyatt (1997) in regard to stock prices, which are seen to increase by

approximately 0.2 percent upon the appointment of an additional non-executive director by the firm. Those entities that significantly enlarged the number of independent directors have above-average stock price returns. Furthermore, the claim is also made that the majority of board members need to be independent directors. In the context of India, Jackling and Johl (2009) highlight that a large number of external directors present on the company board were linked with greater firm performance.

Nevertheless, other studies show an insignificant and negative link with firm performance, such as that conducted by Abdullah (2004), who recognizes that the independence of board members has an insignificant link with any of the measures of performance, which is a view supported further by other academics in the field such as Amran (2010); Finegold *et al.* (2007); Lang, Lins and Miller (2004); Rashid *et al.* (2010) all of whom established a negative value with ROA. With this in mind, Agrawal and Knoeber (1996); Yermack (1996) identified a negative link between the proportion of independent directors on the board and Tobin's Q. Nevertheless, their findings are not necessarily the same as the case of performance measures. In a similar vein, one study recognized a comparable negative link, although it was shown that such a link is consistent for various performance measured across differing periods of time (Haron *et al.*, 2008). The researches recognized an inverse link between independence and earnings per share and ROE following the examination of the technology and construction firms listed in Malaysia. This same conclusion was drawn in the research by Arslan *et al.* (2010) which therefore implies that data asymmetry may be identified between directors, both inside and outside, which could be the cause of the questionable integrity of both the strategic and financial data discussed during board meetings.

In the context of Malaysia, a study was carried out by Ponnu and Karthigeyan (2010), which suggested that there is a lack of convincing support for the belief that external directors positively impact business performance. This view is supported further in the work of Yammeesri and Herath (2010) in the context of Thailand, which suggests that neither independent directors nor grey directors are significant elements in terms of enhancing the value of the firm. In the case of the Philippines, Ferrer *et al.* (2012) sought to establish the impact associated with board independence on firm performance, with a sample utilized comprising 29 publicly-listed property companies based in the Philippines. Importantly, no link was established in regard to any of the performance measures. Markedly, no notable link was established in regard to any of these performance measures. Furthermore, according to Hawkamah and IFC survey of 2008, of the listed companies in MENA countries, 55 percent are seen to have either no independent directors or only one independent director on the company board. According to Al Majlis, The GCC board directors Institute report of 2011, approximately 64 percent of board members of GCC companies are seen to be independent. Such an increase could be explained when considering the regulations implemented recently in the area. A local research conducted by Al-Abbas (2009) recognizes a link between the integrity of the financial accounting process and independent directors' presence on the company board. However, this is the case unless the market recognizes independence as being something that enhances the overall confidence in the company's reputation. On the other hand, a significant number of non-executive directors could mean strategic activities are hindered (Goodstein *et al.*, 1994), along with the presence of excessive monitoring (Baysinger & Butler, 1985), a lack of actual independence (Demb & Neubauer, 1992), a lack of experience (Agrawal & Knoeber, 1996), and too many older and less productive

individuals (Juran, Gryna & Bingham, 1975; Koontz, 1967). It is held by some that non-executive independent directors are under the power of the owner-manager, meaning there is the keen presence of political pressure. Furthermore, the cultural and societal nature along with the appointment of member in board of directors is impacted through discrimination and prejudice, which is recognized as playing a notable role when choosing members. Such behaviour is recognized as having the potential to impact the independence of the board, which could result in increased company-oriented risks (Al-Ghamdi, 2012; Chahine & Tohme, 2009).

3.5.1.4 Board Meetings

Despite the fact that the Saudi Code (2006) has not yet details the number of meetings to be carried out amongst listed companies, it is advised that such meetings should be held four times annually in order to endorse the financial statements on a quarterly basis. In line with the Hawkamah and IFC survey of 2008, it is seen 60 percent of listed companies in MENA countries (i.e., Saudi Arabia) met four times annually, with only 15 percent meetings more frequently for between 6 and 9 meetings annually. It is believed that the frequency of board meetings can deliver insight into the level of activity and diligence commonly following inadequate performance. Accordingly, a greater frequency of board meetings is believed to be linked with improved firm performance. With this noted, it is considered that the frequency of board meetings is consistent with agency theory and contracting theory, both of which emphasize that company boards show greater capabilities in terms of advising, disciplining and monitoring management, and thus improving performance, when there is a greater frequency in board meetings (Jensen, 1993; Lipton & Lorsch, 1992; Vafeas, 1999).

The empirical support surrounding the effects of the frequency of board meetings on organisational performance is contrasting, with Adams, Hermalin and Weisbach (2010), for example, conducting a large-scale survey with the aim of establishing the roles adopted by external directors as advisors and monitors of management, and subsequently making the claim that directors who mainly control management recognise that they are less involved in the discussions of the Boardroom when compared with other directors, and also that the CEO usually seeks them out for advice. Furthermore, the impacts of board meetings on firm performance were clarified by Karamanou and Vafeas (2005) in the sense that such impacts might not only vary in terms of firm-level characteristics, but also in terms of country-specific CG, and legal and institutional practices. Moreover, Vafeas (1999) makes the suggestion that the frequency of board meetings is a proxy for the time required by directors in order to supervise management. He takes a sample of 307 companies listed in the USA for the period 1990–1994, and subsequently garners much empirical evidence to support the view that boards meet more frequently following the occurrence of a crisis, which helps to improve performance. He further details a statistically significant but negative link between boards' meetings frequency and firm performance, with Tobin's Q adopted as a proxy. Furthermore, a greater frequency of board meetings is seen to be associated with the payment of higher auditing fees paid by such boards, with the conclusion drawn that auditor oversight is complemented by board activity (Carcello, Hermanson, Neal, & Riley, 2002).

Furthermore, it has been argued by Vafeas (1999) that the limited time directors spend together is not normally used for the meaningful exchange of ideas amongst themselves. In actuality, more mundane activities, such as various formalities and the presentation of

reports, take up a large portion of the meeting time, which decreases the time available for efficiently monitoring management (Lipton & Lorsch, 1992) and which can therefore have a negative impact effect on corporate performance. Importantly, board meetings are expensive in various ways, such as in terms of directors' meetings fees, managerial times, refreshments and travel expenses (Vafeas, 1999), all of which can have a negative impact on corporate performance.

In emerging regions with different institutional contexts, CG and legal practices, board meetings frequency and the efficiency of such can differ; meaning the outcomes of such frequency on business performance may be expected to differ from what has been detailed in developing countries. For instance, in a research carried out on a local scale by Al-Ghamdi (2012), it was established that there is a negative association between board meetings and earnings management in Saudi Arabia. This result is in line with the notion that a greater frequency of board meetings results in a greater degree of monitoring; thus, an analysis of the effects of board meetings frequency on firm performance in emerging countries, where there is a lack of empirical support, is recognized as fundamental in terms of delivering a more in-depth view of the impacts of board meetings on firm performance (El Mehdi, 2007).

3.5.1.5 Board Financial Knowledge

Greater educational levels are recognized as aiding in the better management of firms and also with greater receptiveness to innovation, as highlighted by Kimberly and Evanisko (1981). It is considered that there is a link between individual education and conflict over money, and strategic vision and management control, where those who have attained a

greater level of education are recognized as having a good grasp of fiscal issues more so than those who have not sought educational attainment. It is recognized that regulations impact board composition in terms of establishing an independent auditing committee made up of financial professionals, such as in the US Sarbanes- Oxley Act of 2002. In Saudi Arabia, Saudi Code (2006) Part four, Article 14, Paragraph (a) ascertain that

“The Board of Directors shall set up a committee to be named the “Audit Committee. Its members shall not be less than three, including a specialist in financial and accounting matters. Executive board members are not eligible for Audit Committee membership.”

This indicates the importance of specialist knowledge to the board of directors since the board of directors is vested with the responsibility of ensuring that the shareholders' money is not wasted, shareholders ought to have a serious interest in ensuring that the board is staffed with well educated and experienced directors. Firms should look for superior quality directors to monitor management (Fairchild & Li, 2005). Directors' background and competency are essential factors as they could contribute positively to the companies (Johannisson & Huse, 2000).

It has been established by Kesner (1988) that the occupations of the majority of directors are business executives, with lawyers, consultants and school professors following. The expertise of directors, such as in terms of accounting, consulting, financing and law, all help to aid management in the making of decisions. It is suggested by Wiersema and Bantel (1992) that a greater level of education can be linked with higher data-processing capability and the capacity to discriminate amongst alternate stimuli. Markedly, Hillman and Dalziel (2003) establish a link between director knowledge and board capital; this is seen to involve both social and human capital: the former refers to the implicit and tangible

set of resources available through social relationships; the latter refers to the individual abilities, knowledge and skills of directors, and encompasses the basic functional, board-specific and business-specific abilities, knowledge and skills of directors.

The board of directors gains knowledge and insight, which is recognized as having the potential to enhance the quality of activities carried out. It has been demonstrated by Pfeffer (1983) that age is linked with tenure, despite the lack of similarity between the two. Furthermore, owing to the strong correlation between tenure and age, there are a number of justifications behind expecting older directors to have a greater wealth of cognitive resources concerning decision making tasks. Taking information from Taiwanese listed companies, Chen *et al.* (2005) emphasized that intellectual capital adds significant value to firm profitability. Comparable findings were also gathered through the work of Switzer and Huang (2007), who took a sample of mutual funds in Canada. It was established that the mutual funds' performance could be linked directly with aspects of managerial human capital.

On the other hand, a research was carried out by Srivastava and Lee (2008) in the USA with the aim of analyzing the link between top management team age, education and tenure, and firm performance, with the conclusion drawn that top management teams are weakly related with firm performance.

In line with the Hawkamah and IFC survey of 2008, approximately two-thirds of the listed companies in MENA countries were seen to be in need of the board's members' professional experience. The report, which was made available in 2011 through AL Majlis, The GCC board directors Institute, suggests that, in the context of GCC (i.e.,

Saudi Arabia) countries, the board's most suitable expertise is the most critical of issues in regard to the efficiency of the board. Furthermore, the researches discussed previously have also illustrated a link between the general knowledge held by directors and firm performance. Emphasis is placed on the higher level of education in different fields. To date, there is limited evidence supporting the association of board of directors who obtain financial knowledge and firm performance. This implies that the fiscal understanding of directors was not adequately captured through the application of demographic variables.

3.5.1.6 CEO Duality

In the context of Saudi Arabia, the Code (2006) Part four, Article 12, Paragraph (d) bans the merge of the board chairperson role with that of any executive role within the company, such as managing director or CEO, for example. There have been a number of concerns regarding the duality of the CEO role, where it is considered that no one person has unfettered powers. Importantly, both roles notably vary in terms of their affirmation and nature; thus, governance codes may be seen to have taken such differences into account.

Undoubtedly, the positions of CEO and board chairperson are critical, with the latter involving ensuring that all data garnered through the board of directors is done so in a time-effective way, and that the operations of the board are carried out in an effective and efficient fashion; the CEO, on the other hand, is charged with adopting the strategies devised by the board of directors, as well as for managing the daily operations of the firm (Cadbury Report, 1992).

There are two key theories surrounding the link between CEO duality and firm performance within the structure of the board of directors and, which are agency theory and Stewardship Theory (Brown *et al.*, 2011). In the case of the former, the shareholders of the company are referred to as the “principal”, whilst the “agent” is the manager. Importantly, there is the suffering of agency costs if the manager’s actions are not considered to be centered on optimizing the profits of shareholders but rather for their self-interests (Jensen & Meckling, 1976). In an attempt to decrease such agency costs and to accordingly improve the level of firm performance, a distinction can be made between the functions of the CEO and board chairperson, management and decision control, respectively. The chairperson of the board is believed to have the most impact in terms of the way in which it operates, which suggests that the separation of decision management and decision control, and the effectiveness of such, necessitates that the chairperson of the board should not also hold the position of CEO. Firms that separate the two roles should witness performance-related improvement following the change in leadership structure (Fama & Jensen, 1983). Markedly, if the agency theory is correct, companies that separate the roles of CEO and board chairperson should face an enhanced improvement in performance after the change in leadership structure. A study carried out by Fosberg and Nelson (1999) recognized that, those companies implementing separation in terms of leadership structure in order to control agency problems show significant improvements in performance spanning a three-year period after the application of such a model. The study carried out by Daily and Dalton (1994) further establishes that the presence of non-executive chairpersons and non-CEO presidents also enhances the overall valuation of the firm. The correlation between duality and independence with fraud was examined by Sharma (2004) in the context of Australia, with the academic utilizing a matched sample

of no-fraud and fraud firms spanning 1985–2000. The findings emphasize that fraud is more likely when there is the presence of CEO duality. The study carried out by Bhagat and Bolton (2008) shows that the distinction of the two roles (CEO–Chairperson) can be linked with improved and subsequent operating performance (ROA); however, there is no correlation between any of the governance measures and future share price performance. With this taken into account, based on a sample of 75 randomly chosen companies listed in Bursa Malaysia, Zainal Abidin *et al.* (2009) found that more than 70 percent of companies do draw a distinction between leadership structure; however, the impacts associated with CEO duality in line with firm performance could not be established owing to the fact that the business's total resources were not established in the firms. Furthermore, an analysis was carried out by Dogan *et al.* (2013) in regard to the effects of CEO duality on the performance of a firm, utilizing a sample of 204 businesses detailed on the Istanbul Stock Exchange for the period 2009–2010 in the context of Turkey. The research adopted Tobin's Q, ROA and ROE as dependant variables with the aim of measuring firm performance and CEO duality as an independent variable. The research findings were seen to be in line with agency theory, which emphasized a negative link of CEO duality firm performance.

In the USA, where there is the presence of duality amongst most (80 percent) company, the leadership structure has not been considered responsible for inadequate firm performance and the failure of firms to adapt to a changing environment (Brown *et al.*, 2011; Kang & Zardkoohi, 2005). In the UK, CG Codes suggest that companies draw a distinction between the board chairperson role and that of CEO, with those so doing recognized as positive with abnormal return (Cadbury Report, 1992).

In contrast, the stewardship theory recognizes the manager as being a steward who garners a sense of achievement through behaving in a high-performing way and implementing behaviors that are advantageous to the profits of the stockholder. Accordingly, the manager holds the data advantage concerning the company's position, where the shareholder is not able to accurately evaluate the actions or degree of dedication shown by the manager, thus causing opportunistic conditions (Muth & Donaldson, 1998). In line with the stewardship theory, companies enhance their performance upon the amalgamation of the CEO and board chairperson positions.

It has been established by Boyd (1995) that duality can result in greater performance amongst American companies, which may be explained through the distinction between leadership and top management roles weakening power and enhances the potential of conflict to arise between the board and management (Alexander *et al.*, 1993). Brickley, Coles and Jarrell (1997) pose the view that distinction in this regard has the potential to incur costs as well as benefits, with their results implying that separation costs are greater than the advantages for the majority of large-scale corporations. With this noted, the view is clarified by Laing and Weir (1999) that there is a lack of support to suggest that duality impacts firm performance, with no notable difference recognized in ROA for 1992 and 1995, despite the fact that duality was prevalent in 1992 in contrast with 1995.

Haniffa and Cooke (2002) suggest that firm management is more effective when there is a presence of duality leadership owing to the fact that there is decreased information asymmetry and less bureaucracy. Moreover, the view is highlighted by Chen *et al.* (2008a) that businesses might choose to amend their leadership structure in an attempt to enhance firm performance; notably, their findings do not suggest any impacts on performance

following the application of change. Moreover, Iyengar and Zamelli (2009) recognized that companies will make choices regarding their leadership structure in mind of ownership structure decisions and business characteristics. Accordingly, no evidence was documented to suggest that the duality of the CEO is intentionally chosen in order to maximise business performance. A research was carried out by Amran (2010) on family-controlled companies adopting duality leadership in Malaysia, with the findings emphasizing that duality leadership is a common practice in family companies owing to the fact that the chairperson/CEO is more intent on focusing on the business when one person is charged with both roles.

In Asian regions, researches centered on the link between leadership structure (non-duality and duality) and firm performance provides conflicting findings. In the context of Malaysia, it was established by Abdullah (2004) that leadership structure has no impact on the performance of the business. Moreover, it has been claimed by Haniffa and Hudaib (2006) that the types of measurement adopted in regard to business performance impact the ability to establish the link between firm performance and board leadership. It was established that CEO duality has a negative link with ROA; however, there is not a significant link to Tobin's Q. Moreover, Wong and Yek (1991) carried out a research in Singapore, examining the link between modified Tobin's Q and CEO duality, with the outcome representing a positive link. Moreover, they also found that, overall; the modified Tobin's Q of companies with CEO duality is greater than in those businesses adopting non-duality. Their rationale behind the results is that CEO duality is commonly linked with high shareholders. This same finding was recognized in the research by Tan, Chng and Tan (2001), who carried out a research during the financial crisis of 1997.

A local research carried out by Chahine and Tohme (2009) analyzed the links between CEO duality and the initial public offering under-pricing in 12 different Arabian countries in the MENA countries for the period spanning 2000-2007. They found that companies adopting CEO duality show score lower in terms of public offering under-pricing, with their rationale for such centered on the cultural issues linked with family involvement and political ties. Moreover, the link between CEO duality and earnings management amongst listed companies in Saudi Arabia was analyzed by Al-Abbas (2009) for the years 2005, 2006 and 2007, with the findings showing that the distinction between CEO and chairperson suggests lower earnings management.

Some companies implement CEO duality whereas others hold value in a distinction being made between the two. In terms of establishing which one (combined or separate) is best when striving to improve performance, the question was answered through the work of Kang and Zardkoohi (2005), who postulate that duality is not a change occurrence but rather a business-related practice that is implemented under:

1. Suitable conditions, such as reward for the good performance of a CEO; or duality as a way of overcoming environmental complexity, dynamism and resource-scarcity. Such conditions are believed to help in terms of improving firm performance.
2. Unsuitable conditions, such as adhering to institutional pressures, imposed by a powerful CEO, or a result of social exchange reciprocity. Such conditions will cause the performance of the firms to decline.

As shown through the Hawkamah and IFC survey of 2008, approximately 42 percent of companies listed in MENA countries show a mix of chairman and CEO roles.

Furthermore, it is also noted that, in the majority of such countries, company owners are inclined to adopt the positions of both CEO and chairman (Center for International Private Enterprise Global CG Forum, 2011). Accordingly, upon the presence of a duality between such roles, this facilitates one individual to impact the decisions of the board, whether or not such influence is geared towards improving firm performance.

3.5.1.7 Board Multiple Directorships

Multiple directorships refer to directors of a board sitting on more than one board, as noted by Haniffa and Hudaib (2006). In line with the resource dependence theory, which rests on external resources in order to optimize the performance of a firm (Kiel & Nicholson, 2003), the numerous directorships of some directors facilitate a greater degree of access to different linkages and resources, which can help the business to fulfill its full ability to operate efficiently. Moreover, it has been established by Di Pietra *et al.* (2008) that an individual holding a position on more than one board could garner advantages for the business in various ways: primarily, they act as an influential source of information, where multiple directorships deliver data relevant and critical to relating to new policies, practices and trade sectors between companies, which could result in improved performance (Haunschild & Beckman, 1998). Secondly, they also act as tools for control. Bazerman and Schoorman (1983) imply that networks created through various directorships aid in terms of improving corporate control and efficiency owing to the fact that preferable legislation may be encouraged, with the reduction of competition also witnessed. Moreover, additional understanding could also be established in regard to the outcomes of other companies, thus facilitating comparisons, through multiple directorships (Dahya, Lonie & Power, 1996), in addition to improving overall control. Markedly, the study of Ferris *et al.* (2003) utilized a

number of different multiple directorships measures in order to analyze whether or not busy directors have an effect on the performance of the business. Five different measures were utilized: directorship per director (mean); maximum number of directorships held by any one member of a firm's board; percentage directors having three or more directorships; average directorships held by outside directors; and maximum numbers of directorships held by any executive director. It was established through the research that directorship per director in Forbes 500 companies had a positive and significant link in relation to market-to-book value. This evidence supports the presence of directors with multiple directorships. Latif *et al.* (2013) used a sample of 132 Malaysian companies in 2008, they found almost 90 percent of directors of publicly-listed firms have between 1 to 3 directorships and the multiple directorships affect firms' market performance positively but not significantly.

Nevertheless, it may be stated that there are also negative impacts associated with multiple directorships, with Mace (1986), for example, documenting the belief that holding additional directorships could facilitate directors' pursuance of their own aims, thus prioritizing those of shareholders as a secondary concern. A contrasting conclusion was drawn by Fich and Shivdasani (2006) following the completion of a survey of the top 500 corporations in the USA. In the research, it was found that companies with busy directors are equivocal to a weak quality of governance mechanism owing to the fact that their busyness hinders their capacity to become efficient directors within the firm. It is only when such individuals leave their role that positive returns are garnered. This is a view validated through the work of Jackling and Johl (2009), who examined Indian companies with busy directors who may have not possessed the skills and honesty that could

facilitate improved performance. Kiel and Nicholson (2003) consider that neither the market-based nor accounting-based performance-related measures could be notably impacted by the business of the board outside of the company when a regression analysis—which controls for the size of the business—is carried out. There was the measurement of multiple directorships as a percentage of directors holding more than one additional directorship in relation to the total number of directors of the board, which was carried out by Haniffa and Hudaib (2006). Markedly, no significant correlation to ROA was established, through a notable and negative link was established to Tobin's Q.

As shown through the Hawkamah and IFC survey of 2008, between 6 percent and 15 percent of listed companies in GCC countries' directors hold positions on more than one board. As detailed in the Saudi Code (2006) Part three, Article 9, Paragraph (b), "*Names of any joint stock company or companies in which the company Board of Directors member acts as a member of its Board of directors.*" Moreover, Saudi Code also permits a maximum of five directorships amongst companies listed in Saudi Arabia, as can be seen detailed in Part four, Article 12, Paragraph (h): "*A member of the Board of Directors shall not act as a member of the Board of Directors of more than five joint stock companies at the same time.*" The concern surrounding multiple directorships has a number of fundamental inferences in terms of the efficient functioning of companies' boards and the structure of such; these subsequently play a critical role in CG and business performance (Ferrer *et al.*, 2012; & Haniffa & Hudaib, 2006).

3.5.1.8 Board of Directors' Effectiveness Score

A number of studies carried out in the past that have centered on firm performance have provided an empirical link between firm performance and the individual characteristics of the board of directors. In terms of board size, the view is postulated by Alexander *et al.* (1993); Birnbaum (1984); Cicero *et al.* (2010); Goodstein *et al.* (1994); and Pfeifer (1972, 1973) that there is a positive link between firm performance and board size. On the other hand, however, other academics Muth and Donaldson (1998); Provan (1980); Zahra and Pearce (1989) recognize a negative link. In relation to the independence of the board, Abdullah (2004); Finegold *et al.* (2007); Rashid *et al.* (2010) find inconsistent evidence to support the link between board independence and firm performance. Importantly, Zainal Abidin *et al.* (2009) and Uadiale (2010) believe there to be a positive relationship between board independence and firm performance, whilst the opposite is identified through Agrawal and Knoeber (1996); Amran (2010); Finegold *et al.* (2007); Lang *et al.* (2004); Rashid *et al.* 2010; Yermack, (1996) that find a negative relationship between board independence and firm performance. In specific regard to board meetings, a positive link has been established between board meetings and firm performance (Vafeas, 1999). Conversely, a negative link was recognized by Carcello *et al.* (2002) between board meetings and firm performance. In relation to CEO duality, a number of researches have been conducted, with Chahine and Tohme (2009); and Fosberg and Nelson (1999) noting that a distinction between the role of chairperson and that of CEO results in promising performance. In contrast, Dogan *et al.* (2013) believes there to be a negative link between CEO duality and firm performance. With regard to board multiple directorships, Di Pietra *et al.* (2008); Richardson (1987) find that positive association is identified between boards

multiple directorships and firm performance, whilst Fich and Shivdasani (2006) note a negative link. The aforementioned researches have, to some degree, caused inconclusive and conflicting findings. In order to avoid such results, another line of research has begun to emerge, which is centered on the characteristics of the board of directors utilizing a composite score. For instance, Bauer *et al.* (2008) have analyzed the link between board characteristics (the number of independent directors on the board, the frequency at which shareholders can elect the board, and the degree to which members of the board function in line with shareholders' interests) and the performance of stock prices in Japan. They established that Japanese firm with a high rating notably outperform Japanese firms, demonstrating a low rating of up to 15.12 percent annually.

The rationale underpinning the composite measure of CG mechanisms rests in the fact that the most ideal mix of CG mechanisms is recognized as invaluable when striving to safeguard shareholders' interests and decreasing agency costs as a result of CG efficiency, garnered through different channels, where the efficiency of particular mechanisms rests on the efficiency of other elements (Cai *et al.*, 2009). Moreover, as noted by Ward *et al.* (2009), corporate mechanisms can be analyzed as a group of mechanisms, safeguarding the interests of shareholders, which is noted as being more ideal than examining corporate mechanisms as individual entities as they complement one another or are alternates for one another. The researchers further state that the researches carried out deliver unclear conclusions owing to the fact that analysis was carried out on an individual basis, with the way in which each could possible contribute in overcoming agency problems an issue tackled in isolation; otherwise stated, the fact that individual mechanisms depend on their counterparts was an aspect that was overlooked. In this same way, it was suggested by

Agrawal and Knoeber (1996) that the results associated with the individual mechanism's impact could be flawed as the effects of various single mechanisms is weakened in the combined model. In this same vein, the measurement of the combined impact suggests strong impacts when contrasted alongside the measurement of individual impacts (O'Sullivan *et al.*, 2008).

The current research analyses the characteristics of the board of directors (the board Royal family members, the board size, the boards independence, the boards meetings, the CEO duality and the board multiple directorships) as a whole in order to garner insight into the aggregate impact of such elements on the performance of the firms. Moreover, an additional variable has been incorporated in the board score: namely, the Royal family members on the board. With this noted, it is expected that such an element will act in a substitutable or complementary way when making decisions linked with the improvement of firms performance.

3.5.2 Audit Committee Effectiveness

The audit committee is a subcommittee of the board and is made up of non-executive independent directors, the emphasis of which is placed on audit quality, financial reporting considerations, internal audit, and internal control (Abbott & Parker, 2000; Adams, 1994; Byard, Li & Weintrop, 2006; Naiker & Sharma, 2009). The main responsibilities of the board of directors are concerned with external auditors and internal control; however, such tasks are usually assigned to the audit committee. In such an instance, the organization's internal auditor, along with an external auditor, assess internal

controls, with their findings subsequently reported to the audit committee (Naiker & Sharma, 2009).

The audit committee has not only an intermediary role between management and the board, but also the role of protecting shareholders. Moreover, the audit committee supervises, monitors and assesses any choices made by management. More specifically, the audit committee adopts not only a role where they are an intermediary between management and the board, but also has the role of protecting shareholders. In this regard, it is noted by Chen, Duh and Shiue (2008) that the audit committee is able to help to establish and maintain contracts between shareholders and management. In a similar vein, the agency relationship is described by Muth and Donaldson (1998) as the delegation of power from the owner to management. An audit committee, when operating efficiently, adopts the role of arbiter when there is disagreement between shareholders and internal management (Fama & Jensen, 1983; Kent, Routledge & Stewart, 2010). Otherwise stated, the audit committee's role is to protect the business through its ability to question top management in terms of the way in which financial reporting obligations are dealt with, in addition to ensuring the application of corrective actions.

The implementation of an audit committee is a fundamental stage when striving to ensure CG standards are high (Cadbury, 1992). The application of improved CG practices, such as through the presence of an efficient audit committee, is expected to enhance overall management supervision, and decrease information asymmetry issues; subsequently, improve firm performance (Chen *et al*, 2008). It is held by Wild (1996) that the improved quality of disclosed financial reporting enhances the performance of the firm. Accordingly, the audit committee's role becomes fundamental, not only to the business

itself but also to other parties, such as shareholders. It has been reported by Campbell (1990) and Vicknair, Hickman and Carnes (1993) that, if the audit committee is found to be lacking in efficiency, this can cause significant financial issues in the firm. Importantly, the implementation of an audit committee is recognized by Teoh and Lim (1996) as being a response to business scandals, with Chen *et al.* (2008) further suggesting that, in mind of agency theory, shareholders assign some of their responsibilities and authority to a team comprising a number of professionals, with the expectation held that their expertise be directed towards improving the overall performance of the business.

Various official committees have suggested the adoption of audit committees in public entities, such as in the cases of the Cadbury Committee (1992) in the UK, the Treadway Commission (1987) in the US, the MacDonald Commission (1988) in Canada, the Malaysian Securities Commission (1993) in Malaysia and the MCI (1994) in Saudi Arabia. Such committees have provided a very clear specification as to the role adopted by their audit committee in the development of financial aspects of CG, such as auditing and financial reporting.

A number of suggestions relating to the adoption of an audit committee, in the context of the USA, were provided by the Blue Ribbon Committee (1999) in its report. All of the auditing committee members need to be non-executive independent directors. Moreover, there need to be at least three financially competent members on the audit committee. Furthermore, audit committees need to have a written charter, outlining all obligations and tasks, and there should also be an annual report devised, documenting whether or not the responsibilities of the audit committee have been fulfilled. Importantly, in the annual report provided by the committee, there should be the inclusion of details relating to how

responsibilities were carried out. Markedly, owing to the fact that the audit committee is recognized as a representative of shareholders, it has responsibility and authority to appoint, assess and replace external auditors. In this vein, there needs to be some discussion as to whether or not external auditors have fulfilled their obligations and maintained their independence. The external auditor needs to consider financial reporting quality with the audit committee, with all auditors reviewing the financial statements devised on a quarterly basis.

In the context of the UK, there have been recommendations made by the Cadbury Code that suggest that all listed firms need to have an audit committee comprising a minimum of three individuals, all of whom need to be non-executive directors, with most independent. In the context of Malaysia, a number of similar suggestions have been postulated by the Malaysian Securities Commission (1993) in mind of the adoption of an audit committee. Such suggestions centre on the composition and operations of the audit committee, as well as the report, review and quorum of the audit committee board. In the context of Saudi Arabia, Ministry Decree No. 903, dated 12/8/1414AH (23/1/1994), was issued by the MCI, which is concerned with the organization of the audit committee's code of practice in Saudi companies⁹. Regardless, however, audit committee development was largely motivated by concerns relating to the gap between the auditee and the external auditor, and the problems of large, public Companies (Al-Moataz, 2003). The role adopted by the audit committee, as well as the scope of its work, has been detailed by Al-Twajjry *et al.* (2002), with the suggestion made that there is great variation in these regards when considering Saudi public-listed companies. It is believed that such variations

⁹ In 8/1/1424AH (4/3/2003) SOGPA did recommendations regarding the applying the Ministry Decree No. 903, audit committee.

stem from the differing interpretation of the guidelines delivered by the Ministerial Resolve 903; these are considered somewhat unclear. This point has been proven through the research of the SOCPAs' committee in 2007, which aimed to assess audit committees' role in the context of Saudi Arabia, with the conclusion drawn subsequently the responsibilities and functions of audit committees were lacking clarity. Moreover, audit committees' members were unaware of the purpose of such committees (Falgi, 2009).

To a significant extent, the audit committee composition is inadequate in itself, and does not provide proof regarding the actual degree of control (Deli & Gillan, 2000)—unless the effectiveness of its characteristics is established, such as audit committee outside financial expertise, multiple directorships, size, independence, meetings, and financial expertise. Each of these elements mean a greater degree of effectiveness is displayed by the audit committee in a number of areas, such as compliance issues, dealing with external auditors, financial reporting, internal auditing and risk management. This will place emphasis on reducing the agency conflicts, safeguarding the interests of stakeholders and thus enhancing the overall value of firms.

3.5.2.1 Audit Committee Outside Financial Expertise

One of the more distinctive aspects of the corporate scenario in the context of Saudi Arabia is the common practice adopted by financial experts external to the board of directors, adopting the role of a member of the audit committee. Financial experts are assigned with membership in the audit committee (but they are not assigned as members on the board of directors) as a result of their knowledge base and experience in financial affairs.

Through their assignment, a company might believe it will be better positioned to practice monitoring and control which, in turn, lead them to make consistent judgments, reach consensus more often and have better insight than audit committee members lacking in experience. This pattern is seen to be in line with the agency theory, where financial experts may be able to complement the expertise of the audit committee through the provision of monitoring and controlling, such as knowledge and experience. It has been acknowledged that members of the audit committee have diverse backgrounds, thus meaning there could be a lack of technical knowledge or experience when needing to efficiently supervisor auditing and accounting operations (Kalbers & Fogarty 1993; Lee *et al.*, 2004; Yatim *et al.*, 2006). A number of companies might choose to assign financial experts from outside of the company or the board of directors. Researches carried out previously suggest that the audit committee's financial experts are expected to carry out their controlling roles on the financial reporting process in an effective way, particularly when identifying material misstatements or exercising internal controls (Krishnan, 2005; Raghunandan, Read & Rama, 2001). Similarly, the view is held that expert audit committee members are usually better positioned to make more consistent judgments, reach consensus more often and have better insight than audit committee members lacking in experience. Moreover, members of the audit committee who have financial experience are usually recognized as having a more in-depth understanding of auditing issues and risks, and their procedures (DeZoort & Salterio, 2001). The view has also been held by Cohen *et al.* (2002) and Knapp (1991) that external auditors do not refer complicated auditing matters to audit committee members who are viewed as not having expertise in the field in question. Audit committee financial experts' efficiency has been afforded much attention in prior researches; on the other hand, there is a lack of research into the

incidence of audit committee financial experts who are not positioned on the board of directors or who are not employed in the company. This research will be individual in the sense that it seeks to identify the link between financial experts' members on the audit committee who are not members of the board of directors or staff in the company with firm performance.

3.5.2.2 Audit Committee Multiple Directorships

Researches carried out previously have considered the concept of multiple directorships as directors holding board positions on more than one board (Haniffa & Hudaib, 2006; Latif *et al.*, 2013). However, few studies argued audit committee multiple directorships affect firm performance (Aldamen, *et al.*, 2012). Based on the agency perspective, audit committee multiple directorships is needed for carrying out its monitoring responsibilities delegated by the board in order to add value to firm. In the view of Haniffa and Hudaib (2006), the concept of multiple directorships on the board of directors and multiple directorships on audit committee may be explained as a member of the audit committee who holds a position on more than one board of directors or audit committee. Members holding more than one position would have greater knowledge and experience relating to the company, and are therefore positioned well to make sound strategic decisions (Di Pietra *et al.*, 2008; Latif *et al.*, 2013). Prior researches highlight that multiple directorships has a number of fundamental implications in terms of the efficient functioning and structure of companies' boards and audit committees; in turn, these have a fundamental role to play in firm performance and CG (Ferrer *et al.*, 2012; Haniffa & Hudaib, 2006). With support to this, Aldamen *et al.* (2012) found a positive relationship between audit committee multiple directorship and firm performance.

However, those who hold different directorships on audit committees have additional responsibilities, and therefore may not be able to adequately monitor management, thus inducing additional agency costs. A number of researches imply that the holding of numerous directorships negative impacts firm performance (Fich & Shivdasani, 2006; Mace, 1986). The determinants relating to the frequency of meetings held by audit committee with multiple directorships has been examined by Sharma *et al.* (2009) in the context of a voluntary governance system—notably that of New Zealand. It has been established that holding various directorships is negatively linked with meetings frequency, where fewer meetings are held when members of the audit committee hold positions on numerous boards. This suggests that, when members service on different boards, they will be unable to effective conduct their monitoring responsibilities effectively (Core, *et al.*, 1999; Vafeas, 2003). In addition, it is suggested by Beasley (1996) that there is a positive link between multiple directorships and the potential for fraud to arise. This has been considered through the use of the logit regression analysis of 75 fraud and 75 no-fraud firms.

3.5.2.3 Audit Committee Size

The listed companies in Saudi Arabia have been required to adopt an audit committee made up of at least three individuals. The audit committee size has a proxy for efficiency, as noted by Kalbers & Fogarty (1993) owing to the fact that the audit committee size is taken as control. Because, in order to control, documentation available on accounting, auditing and fraud, Kiger and Scheiner (1997) suggests that larger numbers of people involved with a particular activity significantly decreases the potential for wrongdoing owing to the fact that conspiracy is made more difficult. Moreover, it has been

acknowledged that audit committees that are larger in size improve financial reporting quality (Yatim *et al.*, 2006) and further reduce debt financing costs (Anderson *et al.*, 2004).

In addition, audit committee size has been widely considered as an indication of the availability of control that can highlight the value of improved firm performance. Archambeault and DeZoort (2001) examined the effects of the size of the audit committee on suspect auditor-switching. A negative link was identified between suspect auditor-switching and the size of the audit committee. Evidence has been identified through the work of Anderson *et al.* (2004) to suggest that bondholders have the capacity to decrease their risk premium for companies adopting greater efficiency in monitoring by both the audit committee and the board, apparently providing the reassurance that the firm's accounting disclosures are reliable and encompass integrity. It was also established that the size of the audit committee and the board size are all inversely linked with debt costs.

On the other hand, larger audit committee can also result in governance being managed ineffectively, therefore creating more frequency audit committee meetings (Vafeas, 1999). The link between the size of the audit committee and financial reporting quality has been examined through the work of Abbott, Parker and Peters (2004), with the conclusion drawn that the size of the audit committee does not impact the quality of financial reporting. The study by Chan and Li (2008) found a negative relationship between firm value (Tobin's Q) and audit committee size. Very few researches have analyzed the effects of the size of the audit committee on the performance of the firm. In this regard, audit committee size is seen to increase the number of meetings, thus delivering greater efficiency in the monitoring and thus achieving greater firm performance (Raghunandan

& Rama, 2007). With this in mind, the suggestion has been made that in an Asian context, there is a shortage of research carried out in the field of audit committee size as Al-Ghamdi (2012) was stated in his study. Accordingly, this research might add value in terms of decreasing the gap in researches centered on firm performance.

3.5.2.4 Audit Committee Independence

In line with agency theory, audit committees are recognized as one of the fundamental monitoring tools, where the board, its representatives or other principals, are willing to fund the use of financial reports in order to assess the performance of management (Goddard, & Masters, 2000; Jensen & Meckling, 1976). Previous studies have focused on independence of audit committee since establishing audit committees that provide better financial reporting and ensure continual improvement in management performance and this is generally confirmed by existing empirical studies (Bradbury, Mak & Tan, 2006; Donohue, Reed & Storrud-Barnes, 2007; Klein, 2002; Krishnan, 2005; Raghunandan & Rama, 2007; Rainsbury, Bradbury & Cahan, 2009; Rickard, 1993). It is generally considered imperative that the audit committee be confined to non-executive independent directors if it is to carry out its duties effectively. The independence of the audit committee members is important as the monitoring they provide affects audit quality (Abbott & Parker, 2000) and auditor independence (Abbott, Parker, Peters & Raghunandan, 2003). Independent audit committees are associated with higher disclosure quality (Karamanou & Vafeas, 2005) and a lower cost of debt finance (Anderson *et al.*, 2004). Bronson, Carcello, Hollingsworth and Neal (2009) find the benefits of audit committees are limited unless the committee comprises non-executive independent directors only. A research carried out on British firms suggest that the proportion of

outside directors is a critical consideration, restricting income-increasing earnings management in order to circumvent the reporting of losses; however, no comparable role is recognized for the audit committee (Peasnell, Pope & Young, 2005). This view stands in opposition to that of Davidson, Goodwin-Stewart and Kent (2005), who recognize an inverse link between the audit committee and the independence of the board, alongside the level of earnings management amongst organizations operating in Australia. Moreover, further evidence is garnered by Klein (2002) in regard to American firms, with the view held that the independence of both the audit committee and the board are critical restrictions in regard to earnings management. Evidence from Asian countries, as provided by Bradbury (2006), makes reference to a link between accounting quality and audit committee composition, as suggested through discretionary accruals. The study took a sample of 139 companies operating in Singapore and 113 from Malaysia, with the results showing that the independence of the audit committee is linked with a greater quality of earnings; however, the link was recognized only when the discretionary accruals were seen to increase income, thus implying that audit committees are significant in the financial reporting process, such as through restricting the degree of income-increasing earnings management.

Markedly, in this vein, Peasnell *et al.* (2005) have not garnered adequate proof surrounding the efficiency of the audit committee in terms of decreasing earnings management proficiency. Moreover, the study carried out by Klein (1998) recognizes that non-independent members are able to provide board members with valuable insight, with the research emphasizing a positive cross-sectional link between finance and investment committees and the percentage of insiders, and firm performance. Furthermore, it was

found by Anderson *et al.* (2004) that those audit committees that are completely independent achieve reduced bondholders' risk premium, which are associated with a much lower cost of debt financing.

Markedly, a research was carried out by Hawkamah & IFC in 2008, which suggests a significant presence of audit committees (77.8 percent) in MENA countries; however, notably, only 26.4 percent of these committees are made up of a number of independent directors, in line with good CG. Furthermore, a report was published by AL Majlis, The GCC Board Directors Institute in 2011, which implies that as much as 67 percent of GCC companies encompass an audit committee, which is a percentage that has increased from 20 percent in just a two-year period. Regardless of the fact that the literature on the independence of the audit committee has delivered a number of reasons justifying the independence of the audit committee, inconclusive and mixed findings have been found across different sectors.

3.5.2.5 Audit Committee Meetings

Various researches and governance best practices have achieved agreement as to audit committees' proficiency in conducting tasks and mitigate potential agency problems (Jensen & Meckling 1976; Sharma *et al.*, 2009; Shleifer & Vishny, 1997). In order to show diligence, audit committee members need to show inclination towards investment efforts and time in their duties and responsibilities (Lee *et al.*, 2004). Moreover, there is the suggestion that an active audit committee has the ability to influence board or management decisions (Abbott *et al.*, 2004; Al-Moataz, 2003). An audit committee reporting significant levels of activity is recognized as taking its responsibilities seriously

and ensuring efficiency when carrying out tasks that a committee showing a lower degree of activity (Archambeault & DeZoort, 2001). Nevertheless, CG-related authoritative statements fail to address considerations such as meetings length and frequency, which means audit committees are assigned much discretion in this regard (Cadbury Report, 1992; Saudi Code, 2006; Sharma *et al.*, 2009). Accordingly, there is the suggestion that three or four meetings need to be carried out on an annual basis (Abbott, Parker, Peters & Rama, 2007; Sharma *et al.*, 2009) as this would help to develop significant monitoring, resulting in manipulation being circumvented.

There has been evidence garnered by Anderson *et al.* (2004) to show that bondholders are willing to decrease their risk premium in the case of those companies with a greater degree of effectiveness in board and audit committee monitoring, which provides some degree of assurance as to the accounting disclosures practiced by the company and the integrity of such. It is further noted that the meetings frequency of the audit committee and the board are inversely linked with debt costs. A number of researchers, namely Kent, Routledge and Stewart (2010); Kent and Stewart (2008) recognize a good degree of disclosure in relation to the International Financial Reporting Standards impact for those companies with better governance (as measured by more frequent meetings of the board and its audit committee, and the engagement of a large audit firm). In 2004, a study by Abbott *et al.* (2003) took a sample of 78 companies with the aim of establishing a link between audit committee activities and earning management. The study found a negative link between audit committee meetings and financial reporting restatements and corporate fraud. A number of other empirical researches have noted that audit committee meetings frequency has a negative impact on earnings management (Abdul Rahman & Mohamed

Ali, 2006; Xie, Davidson & DaDalt, 2003), fraudulent financial reporting (Abbott *et al.*, 2000; Beasley, Carcello, Hermanson & Lapides, 2000), and financial reporting problems and misstatements (Abbott *et al.*, 2000; Yatim *et al.*, 2006), and subsequently increases the possibility that there will be enforcement action implemented by the Securities and Exchange Commission (McMullen & Raghundan, 1996). Nevertheless, Lee *et al.* (2004) notes empirically that there is a link to be recognized between both auditor resignation and the choosing of a high-quality successor auditor and the frequency of meetings by the audit committee. In this same vein, a significantly positive link was recognized by Abbott and Parker (2000). Moreover, this same finding was garnered by Chen and Zhou (2007) in consideration to audit committee meetings and the choice of Big 4 successor auditors, with disregard to Arthur Andersen.

On the other hand, an insignificant link between the incidence of suspicious auditor-switching and audit committee meetings frequency was found by Archambeault and DeZoort (2001). It is considered that an increase in the frequency of meetings and the number of members provides greater efficiency in terms of monitoring, thus helping to achieve improved firm performance. Importantly, however, it is noted that larger audit committees can ultimately induce ineffective governance, which subsequently results in more frequent meetings (Vafeas 1999). The effectiveness of audit committee characteristics was examined by Lin and Yang (2006) with the selection of a sample of 106 publicly-held companies spanning one year. The results provided no clear evidence to suggest that fraud or earnings restatement will be hindered with frequency audit committee meetings. Moreover, Davidson *et al.* (2005) took a sample of 434 listed Australian companies and found that diligent audit committees are not linked with lower

earnings management. Owing to a shortage of researches in an Asian context concerning the audit committee meetings and performance of the firm, and also owing to the fact that the CG applied in Saudi Arabia neglects to consider the frequency of audit committees, there has been much discretion in the schedule of meetings. Despite the fact that much research has been carried out in regard to audit committee meetings frequency, which emphasizes this element as an efficient indicator in audit committee effectiveness, very little is known about the underlying determinants of meetings frequency. The research suggests that, in the context of the Saudi Arabia, audit committee meetings held frequency might prove valuable in terms of improving the performance of the firm.

3.5.2.6 Audit Committee Financial Expertise

In Saudi Arabia, listed companies are subject to the Saudi Code (2006), meaning they need to assign at least one member to their audit committee who is seen to have financial expertise. Companies operating in the USA are required to adhere to SOX, meaning they need to be clear on whether or not the audit committee includes an individual with financial expertise. In the context of Malaysia, Bursa Malaysia Listing Requirements necessitate at least one member of the audit committee to have financial expertise. A company with an audit committee comprising at least one member with financial expertise is believed to be more likely to avoid restatement issuance (Abbott *et al.*, 2004), thus implying that financial background is critical for the audit committee to function in an efficient and professional manner. It is acknowledged widely that members of the audit committee have notably varied backgrounds, which could mean there is a lack of technical knowledge or expertise in the effective supervision of auditing and accounting functions (Kalbers & Fogarty, 1993; Lee *et al.*, 2004; Yatim *et al.*, 2006). In regard to the ‘financial

expertise' definition, the SEC's original proposal (SEC, 2002b) necessitates a financial expert as having understanding of General Accepted Accounting Principles (GAAP), experience in terms of GAAP application in various areas, such as accruals, estimates and reserves, experience in the auditing and/or preparation of financial statements, experience in internal controls, and understanding of the functions of audit committees.

In specific consideration to Saudi Arabia, the MCI (1994) decision makes clear that the audit committee needs to have one member comprising a good level of financial and accounting knowledge. Nevertheless, the choice did not outline clearly the extent of such, thus meaning this can be interpreted in a number of different ways. This is applicable in regard to what was detailed in the Saudi Code's list of CG. A proposal draft was issued by SOCPA (2004) in relation to the definition of financial experts. It is suggested that at least one of the members on the audit committee needs to have secured a master's degree in accounting or equivalent, in addition to practical experience in auditing and accounting of at least five years; a doctorate degree in accounting, along with practical experience in auditing and accounting of at least two years; or a bachelor's degree in accounting, along with practical experiencing in auditing and account of at least seven years. Studies conducted recently confirm that accounting expertise, within the board (which is characterized by strong governance), adds to a greater degree of efficiency in audit committee monitoring, and then results in improved conservatism (Krishnan & Visvanathan, 2009).

A greater litigation risk linked with being assigned as a financial expert on the audit committee could induce a lack of willingness amongst appointees, particular in sectors with transparent earnings. Suggestions comparable with those of SOX have been

implemented in Saudi Arabia. For instance, audit committees' guidelines were provided by the MCI in Saudi Arabia (1994). Nevertheless, the impacts of such guidelines on the effectiveness of the audit committee are somewhat questionable. In this regard, little proof has been garnered to suggest that the quality of audit committee is linked with either financial reporting quality or the audit fee paid (Rainsbury *et al.*, 2009). Importantly, the board is charged with the main responsibility for internal control, although this is commonly assigned to the audit committee. In such a situation, the internal auditor of the corporation assesses internal controls, reporting directly to the audit committee. In an attempt to enhance audit committee members' financial competence, a former audit partner is sometimes brought into the company, which induces positive impacts in regard to the internal control systems (Naiker & Sharma, 2009). Audit committees with financial expertise members add to significantly less misreporting and a greater degree of monitoring efficiency (Raghunandan & Rama, 2007). Moreover, a greater degree of auditing knowledge and experience results in greater validity in the case of reports, for example (Rainsbury *et al.*, 2009), with empirical evidence suggesting that the market responds in a much more positive way following the appointment of a new expert audit committee member (DeFond *et al.*, 2005).

A research carried out by Chan and Li (2008) utilizes a sample comprising 200 companies, with the top executives of other publicly traded companies defined as finance-trained directors, controlling for firm-specifics, board features, and individual director characteristics. The presence of finance-trained directors on the audit committee improves the overall value of the firm. In this regard, improved reporting conservatism has been established by Krishnan and Visvanathan (2009) when taking a sample of US companies

when a member of the audit committee is a financial expert, but only where there is also a strong board. Moreover, it was established by Hamdan, Al-Hayale and Aboagela (2012) that the characteristics of the audit committee analyzed are not keenly linked with accounting conservatism, excluding the financial experience of audit committee; this is recognized as having a key relationship with conservatism, and thus suggests that greater firm performance is achieved when more members have financial expertise.

3.5.2.7 Audit Committee Effectiveness Score

Regulatory authorities' attentions, in addition to those of academics, are, at the present time, becoming more and more centered on audit committees' efficiency (Abbott & Parker, 2000; Lennox & Park, 2007; Wolnizer, 1995). This is owing to the fact that audit committee are now being recognized as efficient in handling CG through the application of various models, such as those of Japan-German and Anglo-Saxon (Karim & Zijl, 2008). Through agency theory, the assumption is made that the role of the audit committee is centered on supervising and monitoring financial reporting integrity, which, as a result, enhances the overall value of the firm. A great deal of attention has been directed towards the fact that the role of the audit committee is to ensure fraud is completely eradicated, with the key objective to monitor the financial reporting process of the company, as well as reviewing its financial reports, the risk management practices, and its internal accounting controls (Klein, 2002).

The studies carried out thus far in the field of audit committees have provided a link between audit committee characteristics and the performance of the firm through individual tests. Notably, a positive link between firm performance and audit committee

size has been established by Raghunandan and Rama (2007); conversely, a negative link was recognized between firm performance and meetings (Vafeas, 1999). Such researches cause contrasting and inconclusive conclusions to be drawn, with the argument posed that the most appropriate mix of CG mechanisms is regarding as invaluable in terms of reducing agency costs and protecting the interests of shareholder as a result of CG efficiency, garnered through a number of particular channels, with specific mechanisms of efficiency commonly resting on the effectiveness of other elements (Cai *et al.*, 2009). Moreover, it is claimed by Ward *et al.* (2009) that the analysis of corporate mechanisms as a group is more efficient in terms of safeguarding the interests of shareholders, as opposed to completing such an analysis as individual entities. This is explained when considering the fact that such mechanisms complement one another or act as substitutes for one another. The researchers further state that the researches carried out previously have provided a number of conflicting results owing to the fact that they have been analyzed individually, as well as how each may assist in terms of overcoming agency problems; otherwise stated, individual mechanisms rely on their counterparts. In a comparable vein, it is suggested by Agrawal and Knoeber (1996) that the results showing the effects of individual mechanisms might be flawed as the effects of some single mechanisms are diminished in the combined model. Nunnally and Bernstein (1994, p.86) argue that:

because constructs concern domains of observables, a better measure of any construct is obtained by combining the results from a number of measures than by taking any one of them individually... Similarly, combining several observables provides greater construct validity and scientific generalizability in the domain as a whole relative to a single measure.

In the same way, the measurement of the combined effect implies a much stronger impact when compared with the assessment of individual effects (O'Sullivan *et al.*, 2008).

For instance, an empirical research carried out by Cassell, Giroux, Myers and Omer (2012) analyzed a composite measure of audit committee characteristics alongside auditor–client realignments. In this regard, the current research examines the various characteristics of the audit committee—namely audit committee outside financial expertise, multiple directorships, size, independence, meetings, and financial expertise—as a combined measure in an attempt to garner insight into the aggregate effect of such elements on the performance of the firm. Moreover, in the audit committee score there has been the inclusion of one new variable: outside financial experts has not been tested previously. The expectation is that such element act in a complementary fashion in decision making linked with firm performance.

3.5.3 Ownership Structure

Ownership structure is recognised as having the most significant impact on CG systems (Solomon, 2011; Thomsen & Pedersen, 2000), as well as on firm value (Aljifri & Moustafa, 2007; Barclay & Holderness 1989; Demsetz & Lehn, 1985; Soliman, 2013). It has been noted by Hill and Snell (1988) that ownership structure amongst firms operating in the USA positively impact productivity as a performance measure. Based on the agency theory that expressed that “deals with the ways in which suppliers of finance to corporations assure themselves of getting a return on their investment” (Shleifer & Vishny, 1997, p.737). This means that both institutional and market-based induce the self-interested controllers of a company (those that make decisions regarding how the company will be operated) to make decisions that maximize the value of the company to its owners (Denis & McConnell, 2003).

It is acknowledged widely that ownership structure is influenced by the country's laws, with a research carried out by La Porta *et al.* (1998) in the context of common-law countries, suggesting the presence of keen laws directed towards investor-protection, centered on minority shareholders' interests, meaning firms' shareholders are, overall, widely dispersed. In conflict with the French original legal system, which is known to encompass the most vulnerably investor-protecting laws, shares ownership is concentrated. In the study carried out by Wei (2007), there are various differences in terms of CG practices amongst countries in regard to the different ownership structures centered on improving CG practices. Otherwise stated, the quality of CG practices is improved through concentrated ownership. For instance, in both the USA and the UK, the public limited company, in terms of its central nature, means shareholders are distinct from those with control over organisational management. On the other hand, in an East Asian context, for example, controlling shareholders and cross-shareholdings are common. For instance, when considering a Malaysian organisation, one feature is a controlling shareholder through a pyramid-type structure (Haniffa & Hudaib, 2006; Tam & Tan, 2007). Moreover, in a Japanese context, the economy is seen to be recognised as utilising a main bank in regard to its business grouping (known as keiretsu) and shareholdings. Similarly, the main bank lends funds to other firms in the group, meaning the bank is positioned as both a debt-holding and a key shareholder (Brown *et al.*, 2011; Claessens *et al.*, 2000). In Korea, conglomerates (referred to as chaeblos), are known to have complicated shareholding configurations, causing a small strategic shareholding, which is viewed as adequate in terms of organisational control (Kim, Jung & Kim, 2005). Conglomerates are known to have a significant impact on the CG and performance outcomes of firm (Brown *et al.*, 2011).

There has been much acknowledgement that ownership concentration is one of the key CG attributes impacting a firm's agency costs, which is widely accepted and considered from the viewpoint of conventional accounting and finance models. One of the incentives seen to be in alignment with directors' interests and shareholders' interests is that of insider equity ownership (Jensen & Meckling, 1976). Nevertheless, large insider equity ownership, family ownership, government ownership or domestic corporate investors could all add to inadequacies in terms of CG as shareholders are positioned to take wealth at the cost of minority shareholders (Fama & Jensen, 1983; Picou & Rubach, 2006). From an empirical standpoint, a number of researches have detailed a positive link between firm performance and ownership concentration (Agrawal & Mandelker, 1990; Lee, 2006; Sun, et al., 2002; Xu & Wang, 1999; Zeitun & Tian, 2007). On the other hand, in German context, a significantly negative link can be seen between firm performance and ownership concentration (Lehmann, Warning & Weigand, 2004), whilst a significant and negative link is seen between firm profitability and value, with ownership concentration in the context of the UK (Leech & Leahy, 1991). In the case of Hong Kong, it is noted that there is a negative influence on firm value as a result of concentrated ownership (Chen & Cheung, 2000), whilst McConnell and Servaes (1990); Prowse (1992) recognise an insignificant link between firm value and large shareholders.

In the Middle East, three key ownership groups dominant namely, families-owned, government-owned and domestic corporate-owned. These different types of ownership commonly have representatives on the Board of Directors of each company and, as a result, are well-positioned to gain access to internal data, which impacts the overall performance of the entity (Al-Shammari *et al.*, 2008). In the context of the KSA, Soliman

(2013) recognises ownership concentration as having a positive impact on firm performance. Moreover, in Egypt, Abdel Shahid (2003) details a comparable finding to that established by Soliman (2013).

3.5.3.1 Royal Family Ownership

A number of researches conducted previously provide evidence that a group with particular characteristics, such as ethnicity, family power and nationality, for example, plays a key role in the political and socio-economic environments of the country. For instance, the impacts of major ethnicity groups on the selection of auditors amongst Malaysian public-listed firms have been analysed in the context of Malaysia by Che Ahmad *et al.* (2006), with the finding garnered that ethnic groups significantly affect the auditor selection process. Through the use of three different firm performance tools—notably market performance, productivity and ROE—Richard (2000) analysed the links between business strategy, cultural diversity and business performance in the banking sector. The findings emphasise that cultural diversity is strongly linked with performance. Moreover, participative strategy is recognised as positively moderating the link between firm performance and management racial diversity, measured as ROA (Richard *et al.*, 2013).

It has been postulated by Abdul Rahman and Mohamed Ali (2006) in prior research that accounting practices and disclosure are seen to be functions of the nation's cultural heritage and cultural values and cultural, and are seen to impact perspectives towards firm fraud. Despite the fact that impacts on earnings management through Malay directors' characteristics were not found, the argument was posed nevertheless that the presence of

Malay directors on a firm's board and audit committee could restrict opportunistic earnings management.

In line with agency theory, the view is adopted that both shareholders (principals) and royal family ownerships (agents) are considered able to maximise their capacities (Fama & Jensen, 1983; Jensen & Meckling, 1976). The presence of royal family owners as a powerful and prominent power increases the monitoring of management; this has the potential to enhance firm performance. In this same vein, in the Middle East, the most common type of company is royal family owned. As noted through the report by Thomson Reuter, total Arab states have investments worth as much as US\$319 billion in regard to publicly-listed companies. Notably, more than US\$240 billion of investments are controlled by the royal families of the Arab World in the case of publicly-listed firms, thus exceeding sovereign wealth funds and government entities (Zawya, 2013).

This research poses the view that there could be circumstances where various individuals are more powerful than others, meaning that those with greater power impact the behaviours of others in order to achieve end objectives (Clark, 2004). A number of royal family members have shared in various listed firms in the KSA; thus, they are a factor in reducing potential wrongdoing and mismanagement, as recognised by Al-Ghamdi (2012), which could ultimately positively impact the value of the firm.

3.5.3.2 Non-Royal Family Ownership

There has been a notable argument posed in the researches regarding the impacts of family (non-Royal family) ownership on the performance of a business. Two prominent perspectives have been witnessed, which have arisen following this argument, one of

which suggests that a founding family with a long-term interest in the firm will restrict the potential of management to improve firm performance (Amran & Che Ahmad, 2010; La Porta *et al.*, 1999; McConaughy *et al.*, 1998; Villalonga & Amit 2006). Such a perspective may be described through consideration to agency theory, which suggests that concentrated ownership can result in a reduction in agency problems (Fama & Jensen 1983; Tosi & Gmex-Mejia, 1989). The second perspective, which notably contrasts the first, suggests that family control could result in the expropriation of minority shareholders' interests (Jaggi, Leung and Gul (2009), which suggests that agency problems could be faced as a result of conflicts of interest arising from minority and majority stakeholders (Ali, Chen & Radhakrishnan, 2007). Various researches note that family-owned organisations can reap additional advantages at the cost of minority shareholders (Jaggi *et al.*, 2009; Morck *et al.*, 1988).

Nevertheless, family (non-Royal family) ownership, as a concept, relates to the percentage of outstanding common stock possessed by members of the family (non-Royal family) (Maury, 2006; Villaalonga & Amit, 2006). In an attempt to establish whether or not a firm is non-family- or family-controlled, a criteria is utilised, which centres on there being a particular percentage of family ownership, and whether or not a founder, or at least one or two members of the family, are enrolled on the board. Moreover, Villalonga and Amit (2006) utilise a smaller threshold of 5 percent in an attempt to establish which firms are family-controlled, with those exceeding a particular level qualifying to gain family control. Nevertheless, control may even be garnered by a family with less ownership in the organisation, such as through the presence of a pyramidal structure (La Porta *et al.*, 1999).

Family-controlled companies are seen to be governed differently to those that are not (Chami, 1999; Lee, 2004; McConaughy, *et al.*, 1998; Mishra *et al.*, 2001). Essentially, family-controlled firms are notably different to public businesses, the latter of which are more likely to utilise differing approaches and which depend on control systems in comparison with family-controlled firm. Family-controlled businesses are usually overseen by family traits, which are not usually identified in the case of non-family-controlled entities. A theory of family business has been devised by Chami (1999), which seeks to describe the various aspects of family, with emphasis placed on the individuality of family firms as being centered on family ties and the aim that such ties will be long-term if not permanent. Family firms are essentially overseen and directed by family characteristics that comprise valuable elements, such as altruism and trust, which can help to develop ‘an atmosphere of love for the business and a sense of commitment’. Nepotism and favouritism are both regarded from the perspective of family businesses needing to be successful in the capital and product markets, and to compete in such. The family spirit is instilled from very early on, which acts as a controlling and monitoring tool in family-run organisations. As noted by McConaughy *et al.* (1998), there are a number of differences in value and efficiency in regard to founding family controlled firms and non-family controlled firms, with such differences examined with the use of matched paired-sampling to control for ownership effects. It is recognised that founders, as well as their descendants, operate and run firms with a great deal more efficiency than executives without family ties: such family firms are recognised by transparent and clear-cut economic conditions and social links between management and owners, which can result in greater firm performance.

A research carried out by Mishra *et al.* (2001) in Norway analyses impacts on firm value as a result of founding family firms. The findings highlight a positive link between founding family controlled and firm value, which is in line with a research carried out in Taiwan (Chu, 2011), which took a sample of 786 public family-run organisations during the period 2002–2007. Findings recognise family ownership as being positively linked with firm performance, as assessed with the use of ROA. The positive link is strong, especially when family members act as CEOs, chairpersons, directors, or top management; on the other hand, however, when family members are not involved in the control or management of the firms, the association becomes weak. The results emphasise that the possible impacts of family ownership are more likely to be recognised when there is a combination of family ownership with active family control and management.

In regard to the structure of the board, it has been found that external director representation is not able to enhance CG in regard to founding family-controlled businesses. The argument is postulated that, upon the cementing of dedication, there is a diminished need for external board monitoring, with internal directors with knowledge of the marketplace becoming more valuable to such firms. In the context of Asia, it has been noted by Wiwattanakantang (2001) that controlling shareholder and family-controlled businesses can be linked with greater performance in the context of Thailand.

Firms operating in Arab countries are more likely to have concentrated ownership, meaning family participation and generational ties commonly affect governance agreements and links, and are pivotal in regard to economic and political influence (INSEAD, The Business School for the World, 2010). Markedly, more than half of all large family-owned organisations operating in the GCC hold a preference for being

detailed on the region's stock exchange, with one-fifth of these already showing the intention to issue IPOs, whilst almost one-third aim to do so in the foreseeable future, as noted by the Hawkamah newsletter (2009). Some of the main factors pushing family firm IPOs include improving the firm's profile and overall standing; ensuring an exit route for members of the family through divestment; achieving expansion through capital finance; providing acquisition currency through shares; and by international recognition (Hawkamah newsletter, 2009). It is noted that directors are recognised as being most influential and powerful in a firm's structure owing to the fact that families with the majority of board representation could be considered positioned to control the economy (The National Investor Market Insight, 2008). GCC (such as Saudi Arabia) families hold, on average, between 19 percent and 30 percent of firm board seats (The National Investor Market Insight, 2008). Studies emphasise that only approximately 30 percent of family-run firms continue in their operations into a second generation, with only 12 percent succeeding into a third generation, and 3 percent into a subsequent generation (Center for International Private Enterprise Global Corporate Governance Forum, 2011).

3.5.3.3 Government Ownership

The concept of government ownership is explained as firms in which the government holds shares (Feng, Qin & Tong, 2004) or if the government (through investment firms, for example) is regarded as one of the key firm's shareholders (Ramirez & Ling, 2003). Other researches conducted suggest that government ownership in some of the organisations is recognised as a key CG element in enhancing firm performance owing to the fact that government ownership is more influential than other ownerships in such

organisations. This can result in a greater level of monitoring characteristics, as well as opportunistic behaviour mitigation (Demsetz, 1983; & Shleifer & Vishny, 1986).

In contrast, however, there are various governance systems held by the government, which differ to those of other ownership patterns. Shareholder value may not be recognised by government investors as the main aim; otherwise stated, greater emphasis may be directed towards aims centered on non-profitable activities, which could ultimately stand in contrast with the commercial aims of other shareholders (Mak & Li, 2001). Moreover, firms where the government ownership amounts to a greater proportion are commonly seen to not report much conservative earnings (Bushman & Piotroski, 2006), weaken transparency in the context of financial reporting (Bushman, Piotroski & Smith, 2004), pay back voters for their support, for contributing politically, and for their bribery (La Porta *et al.*, 1999; Rajan & Zingales, 2003; Shleifer & Vishny, 1993, 1994), disclose earnings with lower quality in their report (Chaney *et al.*, 2011), acquire the property of minority investors for public use (La Porta *et al.*, 1999; Shleifer & Vishny, 1997) and offer financial insurance to outside shareholders for supporting the government financially and politically (Wang *et al.*, 2008).

On the other hand, empirical evidence gathered in regard to the link between business performance and government ownership remains varied, with Hovey, Li, and Naughton (2003), for example, documenting evidence to show that state ownership in China does not yield explanatory power in terms of business performance. On the other hand, Bai, Liu, Lu, Song and Zhang (2004) recognise that, when the government is seen to be the greater shareholder, market valuation is seen to be much lower, thus suggesting that state involvement could induce poor performance. Furthermore, it is stated by Boardman and

Vining (1989) that private-owned organisations perform better than state-owned firms. On the other hand, it is reported by Ang and Ding (2006) that government-linked organisations show greater market valuation when compared with non-government-linked firms in the context of Singapore when considering the particular nature of government-owned firms and the on-going government supervision. In various international world contexts, a number of researches, Aussenegg and Jelic (2003); Mak and Li (2001); Sun *et al.* (2002), have shown a notable positive link between firm performance and government ownership.

In specific regard to the Emirates—which is known to be a comparable setting to Saudi Arabia—the government has notable ownership in a number of listed companies. Accordingly, such firms are seen to be at greater ease in terms of their ability to achieve financing from different sources when contrasted alongside other types of firm. Moreover, such businesses could have lower levels of pressure in conforming with the criteria of financial reporting, which could ultimately provide management with room to choose from those accounting options that enhance the performance of the firm (Aljifri & Moustafa, 2007). However, it has been detailed by Aljifri and Moustafa (2007) that there is a positive link between firm performance and government ownership in the context of UAE-operating firms.

The government-owned firms in the GCC are recognised as emerging as fundamental players in their own individual domestic stock markets; nevertheless, some of the region's markets relieve some of the listed government-owned firm from any stipulations and criteria in regard to disclosure and transparency. This is an issue needing to be addressed, with all listed companies adhering to the same requirements and standards of disclosure

and transparency. Moreover, enhancing government-owned firms' CG could ultimately result in equally strengthening and supporting various rewards of notable efficiency gains, enhancing public service quality and foreign investment, and achieving improved levels of growth potential. On various occasions, those government-controlled businesses that perform well may achieve positive financial outcomes in the sense that government budgets are commonly utilised in order to save larger government-owned entities (Saidi, 2011).

3.5.3.4 Domestic Corporate Ownership

Jensen and Meckling (1976) note that growth in the owner–largest shareholder holding decreases agency costs, and as a result the requirement of managing earnings so as to ease and lessen contractual restrictions which, consequently, would stimulate and inspire controlling owners to enhance earnings informativeness. This suggests sound CG practices that could impact the value of the firm within the marketplace.

In a number of emerging countries, domestic companies are amongst the main groups of blockholders, as noted by Claessens *et al.* (2000). Allen and Phillips (2000) provide evidence to support the view that companies' ownerships delivers a number of important advantages to firms involved in specific business agreements by decreasing the costs of monitoring the ventures or alliances between firms and their corporate blockholders. The further suggestion is made that greater degrees of resources—financial, organisational and technical—are delivered by domestic investors rather than those provided by foreign investors (Chhibber & Majumdar, 1999; Djankov & Hoekman, 2000; Khanna & Palepu, 2000). Furthermore, the supervision roles of local investors are commonly impacted by

local business and governmental relations and networks (Claessens *et al.*, 2000; Dharwadkar, George & Brandes, 2000; Douma *et al.*, 2006).

3.6 Summary and Conclusion

This chapter provides a brief discussion of the previous studies on CG mechanisms in relation to firm performance based on the agency theory, stewardship theory, and resource dependence theory. Although previous studies have discussed the impact of the board of directors, the audit committee and the ownership structure on the performance of companies, still, there is a shortage in some of the mechanisms have not been addressed in previous studies, in addition to the measurement methods used in previous studies and the period covered by the study. Thus, it does not apply to disseminate the results of previous studies to the context of the Kingdom of Saudi Arabia. There is a need for further empirical investigations to identify the determinants.

CHAPTER FOUR

RESEARCH DESIGN AND METHODOLOGY

4.1 Introduction

The preceding chapter provided a review of the previous studies pertaining to CG mechanisms, represented by the board of directors, audit committee, and ownership structure. After reviewing the relevant previous studies, a framework and hypotheses are developed in this chapter which revolve around factors that affect CG (board of directors, audit committee, and ownership structure) and firm performance. Therefore, this chapter discusses the research framework and the development of the hypotheses to establish the relationship between CG characteristics (board of directors' characteristics, audit committee's characteristics, and ownership structure) with firm performance. Certain measurements are used to test these hypotheses and two equations are proposed in this research. Equation (1) examines board of directors' characteristics, audit committee's characteristics, and ownership structure with firm performance. Equation (2) explores the board of directors' effectiveness score, audit committee effectiveness score, and ownership structure with firm performance. Tobin's Q, ROA, and ROE are used as proxy for firm performance. However, nineteen (19) hypotheses were developed for this research. This chapter is organized in seven sections. Section 4.2 offers and integrates the theoretical framework of this thesis, section 4.3 highlights the hypotheses development, section 4.4 outlines the measurements of the variables, section 4.5 discusses the specifications of the models, and section 4.6 shows the data collection process that was followed. The final section 4.7, highlights the summary and conclusion.

4.2 Theoretical Frameworks

This theoretical framework covers the CG mechanisms (board of directors, audit committee, and ownership structure), board of directors' effectiveness score, and audit committee effectiveness score in relation to firm performance, as suggested in this thesis. Based on the previous studies reviewed in chapter 3, there are numerous studies conducted on firm performance. However, past studies looked at the relationship between board of directors, audit committee, and ownership structure with performance in general. Other studies concerned on However, little attention has been paid to the relationship of certain groups such as Royal family members on the board, outside financial experts on the audit committee, board of directors' effectiveness score, and audit committee effectiveness score, which may enhance firm performance¹⁰.

There are many CG variables in the previous studies. To include all of them would make the model less parsimonious and might affect the results due to limitations of data. Many econometricians suggest that higher number of independent variables would result in the loss of degree of freedom. Most of the variables that I included are based on the requirement of the Saudi Code of CG. The exclusion of certain variables is unavoidable especially due to lack of data. For example, internal control mechanism is not included since the data about it is not disclosed in the annual report.

The research framework of this thesis is developed based on the agency theoretical framework as an underpinning theory, with the other related concepts discussed in

¹⁰ Other studies concentrated on effect of firm performance on CG mechanisms. Valenti, Rebecca and Clifton (2011) and Baysinger and Butler (1985) examined the relationship between firm performance and governance.

relations to several theories such as stewardship theory and resources dependent theory. In addition, these thesis models are developed from the main research question: “How would the CG mechanisms (board of directors, audit committee, and ownership structure), board of directors’ effectiveness score, and audit committee effectiveness score affect companies performance among publicly-listed companies in Saudi Arabia?”

As shown in figure 4.1, the framework of the study for both models (model 1 and model 2) comprises three categories of determinants. The first category is board of directors’ characteristics; board Royal family members, board size, board independence, board meetings, board financial knowledge, CEO duality, and board multiple directorships. Agency theory, stewardship theory, resource dependence theory, and their related hypotheses have systematically been applied to explain the relationship with firm performance. The second category of determinants comprises audit-specific characteristics: audit committee outside financial expertise, multiple directorships, size, independence, meetings, and financial expertise. This variable is replicated from the previous studies on firm performance using agency theory to expound its positive association with firm performance. The third category is ownership structure: Royal family ownership, non-Royal family ownership, government ownership, and domestic corporate ownership. Agency theory and its related hypotheses have systematically been applied to explain the positive association of ownership structure with the probability of improving firm performance.

Model 1 concentrates on these characteristics from an individual perspective, namely, board Royal family members, board size, the board independence, board meetings, board financial knowledge, CEO duality, board multiple directorships, audit committee outside

financial expertise, multiple directorships, size, independence, meetings, financial expertise, Royal family ownership, non-Royal family ownership, government ownership, and domestic corporate ownership. In this model, each variable is examined to determine how it affect firm performance individually in Saudi Arabia. The reason to examine it individually is because the Code of CG makes it mandatory for companies to implement the new requirements. Also, previous studies examine individually, so it is necessary for comparative analysis.

Model 2, that includes two combined variables, board of directors' effectiveness score and audit committee effectiveness score. These two variables are considered new determinants introduced into the factors that affect firm performance in the sense that each variable is a composite index representing board of directors' effectiveness and audit committee effectiveness respectively.

Therefore, model 2 tests the relationship between board of directors' effectiveness score (board Royal family members, board size, board independence, board meetings, board financial knowledge, CEO duality, and board multiple directorships), audit committee effectiveness score (audit committee outside financial expertise, multiple directorships, size, independence, meetings, and financial expertise), Royal family ownership, non-Royal family ownership, government ownership, and domestic corporate ownership. This is because these variables have been composited into one score for the first time and tested with firm performance. Looking at these variables from an individual perspective, will determine the effect of each variable on firm performance as previous studies examined individually and the Saudi Code of CG made it mandatory. In the same time, it is important to look at CG mechanisms (board of directors characteristics and audit

committee characteristics) as a bundle mechanisms to determine their effect on firm performance and not in isolation from each other because these governance mechanisms act in a complementary or substitutable fashion.

Overall, figure 4.1 shows the two models to be examined. The models presents a hypothesized linkage between CG mechanisms and firm performance. The straight line shows the direct effect of attributes. The dotted line represents the effects of control variables on performance.

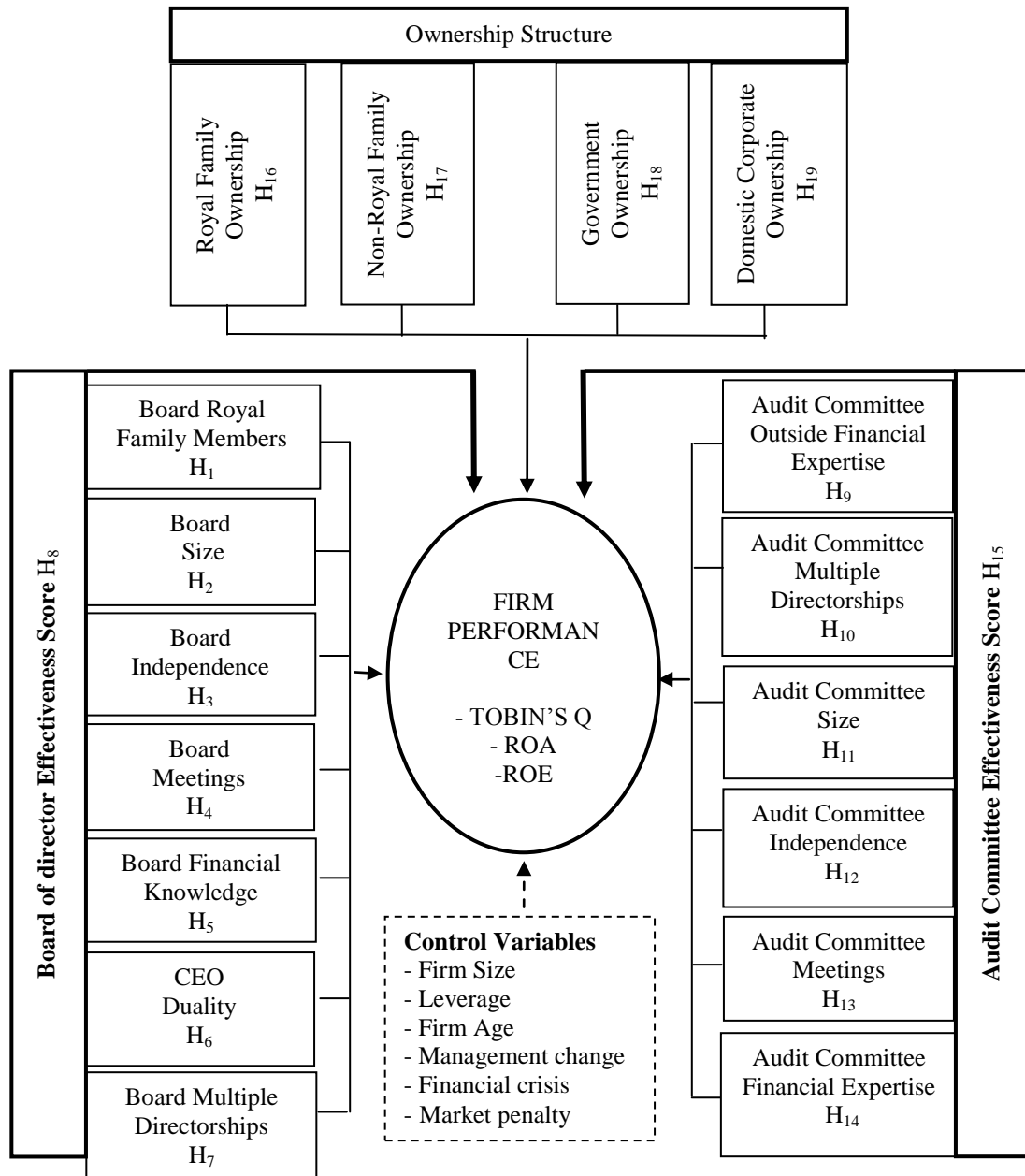


Figure 4.1
Research Framework

4.3 Hypotheses Development

4.3.1 Board of Directors

4.3.1.1 Board Royal Family Members

Certain groups with special characteristics strongly influence decision making. Usually, these groups are seen to be more powerful than others, meaning that some individuals with a greater degree of power affect the actions and views of others in a way that gets things done (Clark, 2004). These powerful groups are more prominent in Asian countries in general, such as ethnic groups in Malaysia (Che Ahmad *et al.*, 2006; Richard, 2000; Richard *et al.*, 2013) and the Royal family in Saudi Arabia. The existence of these groups (as decision makers and owners) who closely oversee management, affects decision making to optimize the wealth of shareholders. This view is consistent with agency theory as recognized by Jensen and Meckling (1976) and Fama and Jensen (1983).

Research carried out previously, such as Che Ahmad, *et al.* (2006) delivers evidence that when a group encompasses particular characteristics, have substantial influence on the auditor selection process. This finding is consistent with the study by Richard (2000), who finds the affect of cultural diversity on decision making to enhance performance. Abdul Rahman and Mohamed Ali (2006) support the belief that disclosure and accounting practices are a function of the nation's cultural heritage and values, which affect attitudes towards business-related fraud.

In the Middle East region, Royal family ownership or Royal family control is one of the most common types of firm organization. In line with a report documented by Thomson

Reuters, all Arab states have made investments in publicly-listed companies (Zawya, 2013). In the context of Saudi Arabia, Royal families are known to have control of approximately 10 percent of all board seats among listed companies. A number of Royal family members are assigned positions on the board and act as managerial associates, meaning they oversee management very carefully, which helps reduce the potential of wrongdoing and poor management (Al-Ghamdi, 2012) which, in turn, may positively influence the firm value.

In addition, resource dependence theory postulates that the presence of Royal family members on the board of directors brings control over their environment by co-opting the resources needed for their firms to prosper. Further, using the power of their dominant families in the country, Royal members can develop links with the external environment. They are able to access timely information which can be used in making instant decisions. Thus, raising funds would be an easy task for Royal family members. These prestigious conditions are believed to enhance firm performance and increase returns to shareholders.

Therefore, using the complementary suggestions of agency theory (monitoring) and resource dependence theory (a link with the external environment), this study argues that the existence of Royal family members on the boards of Saudi-listed companies would positively affect firm performance. The testable hypothesis is expressed in this expectation:

H₁: Ceteris paribus, there is a positive relationship between board Royal family members on the board of directors and firm performance.

4.3.1.2 Board Size

The absolute number of directors is recognized as an essential aspect of efficient governance (Pearce & Zahra, 1992). The resource dependence theory supports the view that firms are afforded links to the outside environment. According to this theory, larger board of directors size shows diversity in term of members' backgrounds, expertise, and skills, which can generate a greater abundance of ideas that can provide high levels of performance (Brown *et al.*, 2011). The size of the board impacts its overall capacity to operate efficiently, with smaller boards commonly seen to be less efficient in terms of obtaining external funding, their budget amount, and leverage from an environment which, in turn, will be associated by greater levels of firm performance, as highlighted by Alexander *et al.* (1993); Goodstein *et al.* (1994); and Pfeifer (1972, 1973). In line with this, the meta-analysis of Dalton *et al.* (1999) is seen to support the view that board size can be linked positively with firm performance.

In the context of GCC countries, the board size of different companies ranges from 8.5 in Qatar to 6.7 in the UAE (Binder, 2009). As for local studies in the Saudi setting, Al-Abbas (2009) finds that a larger board of directors is linked with lesser earnings management among Saudi-listed companies for period 2005 to 2007. Al-Ghamdi (2012) obtains the same result: there is a negative association between board size and earnings management.

Motivated by the above discussion, the present study expects a direct association between board size and firm performance will be limited between 3 and 11 members on the board of directors according to the Saudi Code of CG. The testable hypothesis is expressed in this expectation:

H₂: Ceteris paribus, there is a positive relationship between board size and firm performance.

4.3.1.3 Board Independence

Board independence enhances good CG which improves firm performance. The existence of board independence means that the board properly fulfills its legal obligation to oversee management and safeguard the interests of other parties such as shareholders. Importantly, a board of directors that does not exercise independent judgment, puts the interests of shareholders at risk (Hermalin & Weisbach, 1988).

According to agency theory, board independence facilitates the restraining monitoring of self-interest pursuits, thus helping to decrease opportunities for agency costs and fraud (Fama & Jensen, 1983). Accordingly, the assumption is made that the board becomes more independent with a greater number of non-executive independent directors (Hillman & Dalziel, 2003). Board independence has received considerable attention by governance codes. For instance, the Saudi code (2006) part four, article 12, paragraph (C) and (E) stress board independence. The Saudi code requires that the majority of the members of the board of directors shall be non-executive members and shall not be less than two members or one-third of the members, whichever is greater.

A number of empirical studies have shown that there is a significant and positive link between board independence and firm performance. For example, Amran and Che Ahmad (2009; 2010); Cicero *et al.* (2010); Uadiale (2010); and Zainal Abidin *et al.* (2009) find that board independence has a significantly positive relationship with firm value. This is believed to be because independent directors tend to show greater diversity in terms of their

attributes, background, characteristics and expertise, which could ultimately enhance the decision making and processes of the board, as well as firm performance. Board independence has a strong influence on stock market performance. Byrd and Hickman (1992) and Rosenstein and Wyatt (1997) have established that the larger percentage of non-executive directors, the greater the response of the stock market or stock prices to the firm's tenders offers for other firms. A local study conducted by Al-Abbas (2009) recognizes a link between the integrity of the financial accounting process and independent directors' presence on the company board.

Based on the above discussion, the present study expects a direct association between board independence and firm performance. The testable hypothesis is stated as the following:

H₃: Ceteris paribus, there is a positive relationship between board independence and firm performance.

3.4.1.4 Board Meetings

Agency theory emphasizes that company boards show greater capabilities in terms of advising, disciplining and monitoring management, and thus improving performance, when there is a greater frequency in board meetings (Vafeas, 1999; Jensen, 1993; Lipton & Lorsch, 1992).

An empirical study conducted by Vafeas (1999) on a sample of 307 companies listed in the USA for the period 1990–1994 supports the view that boards meet more frequently following the occurrence of a crisis, which helps to improve performance. Furthermore,

Karamanou and Vafeas (2005) clarified that the impact of board meetings on firm performance might vary not only in terms of firm-level characteristics, but also in terms of country-specific CG, and legal and institutional practices.

A local study carried out by Al-Ghamdi (2012) found that there is a negative association between board meetings and earnings management in Saudi Arabia. This result is in line with the notion that a greater frequency of board meetings results in a greater degree of monitoring.

Based on the above discussion, the present study expects a direct association between board meetings and firm performance. The testable hypothesis is stated as the following:

H₄: Ceteris paribus, there is a positive relationship between board meetings and firm performance.

3.4.1.5 Board Financial Knowledge

Board members who attained a greater level of education are recognized as having a better grasp of fiscal issues than those who have not sought higher education. Since boards are charged with ensuring that the funds of shareholders are not misused, shareholders must ensure that board members are both experienced and well-educated. Directors' background and competency are essential factors as they contribute positively to companies' values (Johannisson & Huse, 2000).

The expertise of directors in areas such as accounting, consulting, financing, and law all help to aid management in making decisions. Wiersema and Bantel (1992) suggested that a greater level of education can be linked with higher data-processing capability and the

capacity to discriminate between alternate stimuli. Hillman and Dalziel (2003) linked director knowledge and human capital individual abilities, knowledge, and skills of directors that encompass the basic functional, board and business-specific abilities, knowledge and skills of directors. Chen *et al.* (2005) emphasized that intellectual capital adds significant value to firm profitability. Switzer and Huang (2007), who sampled mutual funds in Canada, established that the mutual funds' performance can be linked directly with aspects of managerial human capital.

From the above discussion, it is illustrated that there is a link between the financial knowledge held by directors and firm performance. The present study expects a direct association between board financial knowledge and firm performance. The testable hypothesis is stated as the following:

H₅: Ceteris paribus, there is a positive relationship between board financial knowledge and firm performance.

3.4.1.6 CEO Duality

Stewardship theory recognizes a manager as a steward who garners a sense of achievement by behaving in a high-performing way and implementing behaviours that are advantageous to the profits of the stockholder. Accordingly, the manager holds the information advantage concerning the company's position, when the shareholder is not able to accurately evaluate the actions or degree of dedication shown by the manager, thus causing opportunistic conditions (Muth & Donaldson, 1998). In line with stewardship

theory, companies enhance their performance upon the amalgamation of the CEO and board chairperson positions.

Haniffa and Cooke (2002) suggest that firm management is more effective when there is a presence of duality leadership owing to the fact that there is decreased information asymmetry and less bureaucracy. Moreover, the view is highlighted by Chen *et al.* (2008a) that businesses might choose to amend their leadership structure in an attempt to enhance firm performance. Research carried out by Amran (2010) on family-controlled companies adopting duality leadership in Malaysia found that duality leadership is a common practice in family companies, since the chairperson/CEO is more intent on focusing on the business when one person is charged with both. Wong and Yek (1991) carried out research in Singapore, examining the link between modified Tobin's Q and CEO duality, with the outcome representing a positive link. Moreover, they also found that, overall, the modified Tobin's Q of companies with CEO duality is greater than in those businesses adopting non-duality. Their rationale behind the results is that CEO duality is commonly linked with high shareholdings. This same finding was recognized by Tan, Chng and Tan (2001), who conducted research during the financial crisis of 1997.

Local research carried out by Chahine and Tohme (2009) analyzed the links between CEO duality and initial public offering under-pricing in 12 different Arabian countries in the MENA region for the period spanning 2000-2007. They found that companies adopting CEO duality show scores lower in terms of public offering under-pricing, with their rationale for such centered on the cultural issues linked with family involvement and political ties. Moreover, the link between CEO duality and earnings management among listed companies in Saudi Arabia was analyzed by Al-Abbas (2009) for the years 2005,

2006, and 2007, with the findings showing that the distinction between CEO and chairperson suggests lower earnings management.

Based on the above discussion, the present study expects a direct association between CEO duality and firm performance. The testable hypothesis is stated as the following:

H₆: Ceteris paribus, there is a positive relationship between CEO duality and firm performance.

4.3.1.7 Board Multiple Directorships

Based on resource dependence theory, multiple directorships (directors of a board sitting on more than one board) depend on external resources in order to optimize the performance of the firm (Haniffa & Hudaib, 2006; Kiel & Nicholson, 2003). The numerous directorships of some directors facilitate a greater degree of access to different linkages and resources, which can help the business fulfill its ability to operate efficiently.

The advantages of multiple directorships for the business are: first, being an influential source of information, where multiple directorships deliver data relevant and critical to new policies, practices and trade sectors, which could result in improved performance (Di Pietra *et al.*, 2008; Haunschild & Beckman, 1998). Second, acting as tools for control. Networks created through various directorships aid in improving corporate control and efficiency, encouraging preferable legislation and reducing competition (Bazerman & Schoorman, 1983). Moreover, additional understanding could also be established in regard to the outcomes of other companies, thus facilitating comparisons, through multiple directorships (Dahya *et al.*, 1996), in addition to improving overall control.

The advantage surrounding multiple directorships has a number of fundamental inferences in terms of the efficient functioning of companies' boards and the structure of such; these subsequently play a critical role in CG and business performance (Ferrer *et al.*, 2012; Haniffa & Hudaib, 2006).

Empirical studies have been conducted in this matter. Ferris, Jagannathan and Pritchard (2003) have used different measurements of directorship per director in Forbes 500 companies. They found a positive and significant link between multiple directorships and firm performance in relation to market-to-book value. This evidence supports the presence of directors with multiple directorships. This result is consistent with Latif *et al.* (2013)'s study that found multiple directorships positively affect firms' market performance.

Based on the above discussion, the present study expects a direct association between directors holding multiple directorships and firm performance. The testable hypothesis is stated as the following:

H₇: Ceteris paribus, there is a positive relationship between between - multiple directorships and firm performance.

4.3.1.8 Board of Directors' Effectiveness Score

Previous studies in the firm performance discipline have examined board of directors' characteristics as individual determinants associated with firm performance. For example Alexander *et al.* (1993); Birnbaum (1984); Cicero *et al.* (2010); Goodstein *et al.* (1994); Pfeifer (1972, 1973) found a positive link between firm performance and board size. In contrast, however, Muth and Donaldson (1998); Provan (1980); Zahra and Pearce (1989)

recognized a negative link. With regard to board independence, Abdullah (2004); Rashid *et al.* (2010); Finegold *et al.* (2007) found inconsistent evidence to support the link between board independence and firm performance. Significantly, Zainal Abidin *et al.* (2009) and Uadiale (2010) found there is a positive link between board independence and firm performance. At the same time, a negative relationship was found by Agrawal and Knoeber (1996); Amran (2010); Finegold *et al.* (2007); Lang *et al.* (2004); Rashid *et al.* 2010; Yermack, (1996). Vafeas (1999) found a positive relationship between board meetings and firm performance. Conversely, Carcello *et al.* (2002) found a negative link regarding the relationship between board meetings and firm performance. A number of studies varied regarding CEO duality. Some studies found a positive relationship with firm performance (Chahine & Tohme, 2009; Fosberg & Nelson, 1999), whereas some other studies found a negative relationship (Dogan *et al.*, 2013). The previous studies disagree about the relationship between multiple directorships and firm performance. Di Pietra *et al.* (2008); and Richardson (1987) found a positive relationship, while Fich and Shivdasani (2006) found a negative relationship.

From the above discussions, studies have, to some degree, reported inconclusive and conflicting findings. In order to avoid the inconsistent results that have been obtained by the different studies regarding the relationship between board characteristics and firm performance, another type of research has begun to emerge, which is centered on the characteristics of the board of directors utilizing a composite score. The rationale underpinning the using of such score rests in the fact that the most ideal mix of CG mechanisms is recognized as invaluable when striving to safeguard shareholders' interests and decreasing agency costs as a result of CG efficiency, garnered through different

channels, where the efficiency of particular mechanisms rests on the efficiency of other elements (Cai *et al.*, 2009). Moreover, as noted by Ward *et al.* (2009), corporate mechanisms can be analyzed as a group of mechanisms, safeguarding the interests of shareholders, which is noted as being more ideal than examining corporate mechanisms as individual entities as they complement or are alternates for one another. The researchers further state that the research carried out delivers unclear conclusions since the analysis was carried out on an individual basis; the way in which each could possibly contribute to overcoming agency problems was an issue tackled in isolation; otherwise stated, the fact that individual mechanisms depend on their counterparts was an aspect that was overlooked. In this same way, Agrawal and Knoeber (1996) suggested that the results associated with the individual mechanism's impact could be flawed as the effects of various single mechanisms are weakened in the combined model. Nunnally and Bernstein (1994) argue constructs concern domains of observables; in this case, a better measure is achieved by combining the results from a number of measures than by taking any one of them individually. In this same vein, the measurement of the combined impact suggests strong impacts when contrasted alongside the measurement of individual impacts (O'Sullivan *et al.*, 2008).

Therefore, this study argues that using an aggregated measure to combine board of directors' characteristics as a score of effectiveness (board Royal family members, board size, board independence, board meetings, board financial knowledge, CEO duality, and board multiple directorships) would avoid the inconsistency of using the individual characteristics of board of directors examined by the extant research; this, in turn, is

expected to positively influence firm performance. The testable hypothesis is expressed in this expectation:

H₈: Ceteris paribus, there is a positive relationship between board of directors' effectiveness score and firm performance.

Table 4.1
Summary of operationalization and the expected sign of the board of directors for firm performance

Variable	Acronym	Operationalization	Coefficient Predictions	The theory
Dependent Variable				
Firm performance	PERFORMANCE	TOBINS_Q, ROA & ROE	D.V	--
Independent Variables				
Board Royal Family Members	BD_RFAMILY (H ₁)	The number of royal family members on the board	+	Agency theory & Resource dependence theory
Board Size	BD_SIZE (H ₂)	Total number of directors sitting on the board who are not on the audit committee	+	Resource dependence theory
Board Independent Directors	BD_INDE (H ₃)	The percentage of independent non-executive directors on the board who are not on the audit committee divided by total directors	+	Agency theory & Stewardship theory
Board Meetings	BD_MEETS (H ₄)	The number of board of directors meetings during the year	+	Agency theory & Stewardship theory
Board Financial Knowledge	BD_FINKNOW (H ₅)	The percentage of qualified members in accountancy or finance on the board who are not on the audit committee divided by total directors	+	Agency theory & Stewardship theory
CEO Duality	CEO_DUAL (H ₆)	A dummy variable equal to "1" if the firm's CEO is also the chair of board of directors, and "0" otherwise	+	Stewardship theory
Board Multiple Directorships	BD_MDIR (H ₇)	The percentage of directors having more than one directorship in publicly-listed companies who are not on the audit committee	+	Resource dependence theory
Board of Directors' Effectiveness Score	BDE_SCORE (H ₈)	Proportion of board of directors effectiveness	+	Agency, Stewardship and Resource dependence theories

4.3.2 Audit Committee Effectiveness

4.3.2.1 Audit Committee Outside Financial Expertise

Outside financial experts assigned as members of the audit committee is a distinctive aspect of listed companies in Saudi Arabia. Usually this outside financial expert is not a member of the board of directors but is assigned to the audit committee based on his knowledge and experience in financial affairs. This enhances the view that outside expert audit committee members are usually better positioned to practice monitoring and control which, in turn, leads them to make consistent judgments, reach consensus more often, and have better insight than audit committee members lacking in experience. This view is seen to be in line with agency theory. It is well-known that members of the audit committee have diverse backgrounds, meaning there could be a lack of technical knowledge or experience when required to efficiently supervise auditing and accounting operations (Kalbers & Fogarty 1993; Lee *et al.*, 2004; Yatim *et al.*, 2006). It has been recognized that a number of companies might choose to assign financial experts from outside the company or board of directors. This might speed up decision making about financial considerations that could result in enhanced firm performance. Moreover, audit committee members who have financial experience are usually recognized as having a more in-depth understanding of auditing issues, risks, and their procedures (Cohen, Krishnamoorthy & Wright, 2002; DeZoort & Salterio, 2001; Knapp, 1991).

Based on the above discussion, the present study expects a direct association between outside financial expertise and firm performance. The testable hypothesis is stated as the following:

H₉: Ceteris paribus, there is a positive relationship between audit committee outside financial expertise and firm performance

4.3.2.2 Audit Committee Multiple Directorships

Agency theory suggests that audit committee multiple directorships positively influence firm value, since audit committee members holding more than one directorship carry out their monitoring responsibilities, as delegated by the board, more successfully. Audit committee multiple directorships can be defined as a member of the audit committee who holds a position on more than one board of directors or audit committee (Ferrer *et al.*, 2012; Haniffa & Hudaib, 2006). Usually, members holding more than one position have greater knowledge and experience relating to the company, and are therefore well-positioned to make sound strategic decisions (Di Pietra *et al.*, 2008; Latif *et al.*, 2013).

Ferrer *et al.* (2012) and Haniffa and Hudaib (2006) highlight that multiple directorships has a number of fundamental implications in terms of the efficient functioning and structure of companies' boards and audit committees; in turn, these have a fundamental role to play in firm performance and CG. Empirically, Aldamen, et al. (2012) found a positive relationship between audit committee multiple directorships and firm performance.

Based on the above discussion, the present study expects a direct association between audit committee multiple directorships and firm performance. The testable hypothesis is stated as the following:

H₁₀: Ceteris paribus, there is a positive relationship between audit committee multiple directorships and firm performance.

4.3.2.3 Audit Committee Size

Listed companies in Saudi Arabia are required to have an audit committee with at least three individual members. Audit committee size affects availability of resources, efficiency, decreases their risk premium, decreases the potential for wrongdoing, and enhances financial reporting quality (Al-Ghamdi, 2012; Anderson *et al.*, 2004, Archambeault & DeZoort, 2001; Kalbers & Fogarty, 1993; Kiger & Scheiner, 1997; Yatim *et al.*, 2006). Audit committee size as an indication of effective monitoring and control highlights the value of improved firm performance. Kiger and Scheiner (1997) suggest conspiracy is made more difficult with more people involved and significantly decreases the potential for wrongdoing.

With this in mind, the suggestion has been made that, in an Asian context, there is a shortage of research carried out in the field of audit committee size, as Al-Ghamdi (2012) stated in his study conducted in Saudi Arabia. Archambeault and DeZoort (2001) found a negative link between audit committee size and suspect auditor-switching. Anderson *et al.* (2004) established that the size of the audit committee and the board are inversely linked with debt costs. They suggest that bondholders have the capacity to decrease their risk premium for companies adopting greater efficiency in monitoring by the audit committee, apparently providing the reassurance that the firm's accounting disclosures are reliable and have integrity. Anderson *et al.* (2004) and Yatim *et al.* (2006) found that audit committee size reduces debt financing costs and improves financial reporting quality. In the audit committee context, Raghunandan and Rama (2007) found a positive association between firm performance and audit committee size.

Based on the above discussion, the present study expects a direct association between audit committee size and firm performance. The testable hypothesis is stated as the following:

H₁₁: Ceteris paribus, there is a positive relationship between audit committee size and firm performance.

4.3.2.4 Audit Committee Independence

Audit committee independence is considered one of the fundamental monitoring tools. Usually, board of directors, their representatives, or other principals delegate authority and responsibility to the audit committee to use financial reports to assess the performance of management. This trend is in line with agency theory (Goddard & Masters, 2000; Jensen & Meckling, 1976). Bronson *et al.* (2009) find the benefits of audit committees are limited unless the committee comprises non-executive independent directors only. Independence is very important for the audit committee to provide affective audit quality (Abbott & Parker, 2000), higher disclosure quality (Karamanou & Vafeas, 2005), and lower cost of debt finance (Anderson *et al.*, 2004).

Empirical studies have focused on the independence of the audit committee since its establishment. For example, Klein (2002) found independence of the audit committee is a critical restriction in regard to earnings management for American firms. Bradbury *et al.* (2006) imply that audit committees are significant in the financial reporting process, by restricting the degree of income-increasing earnings management. The study was conducted in Asian countries (Singapore & Malaysia) and tried to establish a link between accounting quality and audit committee composition, as suggested through discretionary

accruals. Markedly, in this vein, Anderson *et al.* (2004) noted that audit committees that are completely independent achieve reduced bondholders' risk premium, which is associated with a much lower cost of debt financing. Moreover, the study carried out by Klein (1998) recognizes that non-independent members are able to provide board members with valuable insight, with the research emphasizing a positive cross-sectional link between finance and investment committees and the percentage of insiders and firm performance.

Based on the above discussion, the present study expects a direct association between audit committee independence and firm performance. The testable hypothesis is stated as the following:

H₁₂: Ceteris paribus, there is a positive relationship between audit committee independence and firm performance.

4.3.2.5 Audit Committee Meetings

The members of the audit committee are expected to hold meetings as frequently as necessary to review investment efforts and mitigate potential agency problems (Jensen & Meckling 1976; Lee *et al.*, 2004; Sharma *et al.* 2009; Shleifer & Vishny 1997). Empirically, it is reported that audit committee meetings frequency has a negative impact on earnings management (Abdul Rahman *et al.*, 2006; Xie *et al.*, 2003), fraudulent financial reporting (Abbott *et al.*, 2000; Beasley *et al.*, 2000), and financial reporting problems and misstatements (Abbott *et al.*, 2000; Yatim *et al.*, 2006), and subsequently increases the possibility that there will be enforcement action by the Securities and Exchange Commission (McMullen & Raghundan, 1996). Moreover, board or

management decisions are affected by active audit committees (Abbott *et al.*, 2004; Al-Moataz, 2003). There is a suggestion that three or four meetings should be carried out on an annual basis (Abbott *et al.*, 2007; Sharma *et al.*, 2009), as this would help to develop significant monitoring and avoiding manipulation.

Anderson *et al.* (2004) noted that the frequency of audit committee meetings is inversely linked with debt costs. Kent *et al.* (2010); Kent and Stewart (2008) recognized that applying better CG (as measured by more frequent meetings of the board and its audit committee, and the engagement of a large audit firm) impacts those companies with a good degree of disclosure in relation to International Financial Reporting Standards. Abbott *et al.* (2004) found a negative link between audit committee meetings and financial reporting restatements and corporate fraud through conducting a sample of 78 companies, with the aim of establishing a link between audit committee activities and earnings management.

It is worth mentioning that extant research has been carried out in regard to audit committee meeting frequency, which emphasizes this element as an efficient indicator of audit committee effectiveness. The study suggests that, in the context of Saudi Arabia, audit committee meetings held frequently might prove valuable in terms of improving firm performance. The testable hypothesis is stated as the following:

H₁₃: Ceteris paribus, there is a positive relationship between audit committee meetings and firm performance.

4.3.2.6 Audit Committee Financial Expertise

Most countries' regulations mandate that all listed companies appoint at least one member to their audit committee who is seen to have financial expertise (Bursa Malaysia Listing Requirements; Saudi Code, 2006; SOX). For example, in Saudi Arabia, the MCI (1994) decision makes clear that the audit committee needs to have one member possessing a good level of financial and accounting knowledge. A company with an audit committee comprising at least one member with financial expertise is believed to be more likely to avoid restatement issuance (Abbott *et al.*, 2004), thus implying that a financial background is critical for the audit committee to function in an efficient and professional manner (Kalbers & Fogarty, 1993; Lee *et al.*, 2004; Yatim *et al.*, 2006). Studies conducted recently confirm that accounting expertise, within the board (which is characterized by strong governance) adds to a greater degree of efficiency in audit committee monitoring, and results in improved conservatism (Krishnan & Visvanathan, 2009).

A study by Naiker and Sharma (2009) states that in attempts to enhance audit committee members' financial competence, a former audit partner is sometimes brought into the company, which induces positive impacts with regard to internal control systems. Raghunandan and Rama (2007) stated that audit committees with members with financial expertise add to significantly less misreporting and a greater degree of monitoring efficiency. Moreover, Rainsbury *et al.* (2009) introduced empirical evidence suggesting that the market responds in a much more positive way following the appointment of a new expert audit committee member. Research carried out by Chan and Li (2008) noted that the presence of finance-trained directors on the audit committee improves the overall value of the firm.

This implies that firm performance is positively associated with the number of audit committee members having financial expertise. The testable hypothesis is stated as the following:

H₁₄: Ceteris paribus, there is a positive relationship between audit committee financial expertise and firm performance.

4.3.2.7 Audit Committee Effectiveness Score

According to agency theory, the role of the audit committee is assumed to be centered on supervising and monitoring financial reporting integrity, which enhances the overall value of the firm. The studies carried out thus far in the field of audit committees have provided a link between audit committee characteristics and the performance of the firm through individual tests. These studies have, to some degree, caused inconclusive and conflicting findings; for example, Raghunandan and Rama (2007) found a positive link between firm performance and audit committee size, while conversely, Chan and Li (2008) reported a negative link. Such research causes contrasting and inconclusive conclusions to be drawn, given the argument that the most appropriate mix of CG mechanisms is invaluable in reducing agency costs and protecting the interests of shareholders as a result of CG efficiency. These mechanisms are garnered through a number of particular channels, with specific mechanisms of efficiency commonly relying on the effectiveness of other elements (Cai *et al.*, 2009).

Moreover, as noted by Ward *et al.* (2009), corporate mechanisms can be analyzed as a group of mechanisms that safeguard the interests of shareholders, which is noted as being more ideal than examining corporate mechanisms as individual entities as they

complement or are alternates for one another. It is further indicated that the research delivers unclear conclusions if analysis was carried out on an individual basis, with the way in which each could possibly contribute to overcoming agency problems being an issue tackled in isolation; otherwise stated, the fact that individual mechanisms depend on their counterparts was an aspect that was overlooked. In this same way, it was suggested by Agrawal and Knoeber (1996) that the results associated with the individual mechanism's impact could be flawed, as the effects of various single mechanisms is weakened in the combined model. In this same vein, the measurement of the combined impact suggests strong impacts when contrasted alongside the measurement of individual impacts (O'Sullivan *et al.*, 2008).

Therefore, this study argues that using an aggregated measure to combine audit committees characteristics as a score of effectiveness (audit committee outside financial expertise, multiple directorships, size, independence, meetings, and financial expertise) would avoid the inconsistency of using the individual characteristics of audit committees examined by the extant research and this, in turn, is expected to positively influence firm performance. The testable hypothesis is expressed in this expectation:

H₁₅: Ceteris paribus, there is a positive relationship between audit committee effectiveness score and firm performance.

Table 4.2

Summary of operationalization and the expected sign of the audit committee for firm performance

Variable	Acronym	Operationalization	Coefficient Predictions	The theory
Dependent Variable				
Firm performance	PERFORMANCE	TOBINS_Q, ROA & ROE	D.V	--
Independent Variables				
Audit Committee Outside Financial Expertise	AC_OUTFINEX (H ₉)	The percentage of outside members on the audit committee who are expert in accountancy or finance divided by total members	+	Agency theory
Audit Committee Multiple Directorships	AC_MDIR (H ₁₀)	The percentage of audit committee members having more than one directorship on publicly-listed companies' boards or audit committees divided by total members	+	Agency theory
Audit Committee Size	AC_SIZE (H ₁₁)	Total number of members sitting on the audit committee	+	Agency theory
Audit Committee Independence	AC_INDE (H ₁₂)	The percentage of independent non-executive members on the audit committee divided by total members	+	Agency theory
Audit Committee Meetings	AC_MEETS (H ₁₃)	The number of audit committee meetings during the year	+	Agency theory
Audit Committee Financial Expertise	AC_FINEX (H ₁₄)	The percentage of qualified members in accountancy or finance on the audit committee divided by total members	+	Agency theory
Audit Committee Effectiveness Score	ACE_SCORE (H ₁₅)	Proportion of audit committee effectiveness	+	Agency theory

4.3.3 Ownership Structure

4.3.3.1 Royal Family Ownership

An ownership group with particular characteristics, such as ethnicity, family power, and nationality, plays a key role in the political and socio-economic environments of the country,

as previously discussed by researchers. This group impacts the behaviours of others in order to achieve end objectives (Clark, 2004). In line with agency theory, both shareholders (principals) and power group owners (agents) are considered able to maximise their capacities (Fama & Jensen, 1983; Jensen & Meckling, 1976).

Empirical studies conducted by researchers such as Che Ahmad *et al.* (2006) found that, through the use of three different firm performance tools, ethnic groups significantly affect the auditor selection process. Richard (2000) found that cultural diversity is strongly linked with performance. Moreover, Richard *et al.* (2013) found a positive link between firm performance and management racial diversity.

In the Middle East, Royal families are dominant in most publicly-listed companies. According to Zawya (2013), more than 75 percent of investments are controlled by the Royal families of the Arab world. The presence of Royal family owners as a powerful and prominent power increases the monitoring of management; this has the potential to enhance firm performance. However, a number of Royal family members have shares in various listed firms in the KSA; thus, they are a factor in reducing potential wrongdoing and mismanagement, as recognised by Al-Ghamdi (2012), which could ultimately positively impact the value of the firm.

Based on the above discussion, the present study expects a direct association between Royal family ownership and firm performance. The testable hypothesis is stated as the following:

H₁₆: Ceteris paribus, there is a positive relationship between Royal family ownership and firm performance.

4.3.3.2 Non-Royal Family Ownership

The existence of family (non-Royal family) ownership with a long-term interest in the firm will restrict the potential of management to improve firm performance (Amran & Che-Ahmad, 2010; La Porta *et al.*, 1999; McConaughy *et al.*, 1998; Villalonga & Amit, 2006). This perspective is in line with agency theory, which suggests that concentrated ownership can result in a reduction in agency problems (Fama & Jensen 1983; Tosi *et al.*, 1989). Moreover, family firms are managed by family members who have valuable elements such as altruism and trust, which can help to develop “an atmosphere of love for the business and a sense of commitment.” Nepotism and favouritism are both regarded from the perspective of family businesses as needed to be successful in the capital and product markets, and to compete in such. With the spirit of family, the family firms are controlled and monitored.

Research carried out by Chu (2011) and Mishra *et al.* (2001) highlight a positive link between founding family control and firm value. The results emphasize that the possible impacts of family ownership are more likely to be recognised when there is a combination of family ownership with active family control and management. Wiwattanakantang (2001) noted that controlling shareholder and family-controlled businesses can be linked with greater performance. However, firms operating in Arab countries are more likely to have concentrated ownership (INSEAD, The Business School for the World, 2010). Moreover, in GGC (such as Saudi Arabia) families hold, on average, between 19 percent and 30 percent of firm board seats (The National Investor Market Insight, 2008).

From the above discussion, it is illustrated that there is a link between non-Royal family ownership and firm performance. The present study expects a direct association between non-Royal family ownership and firm performance. The testable hypothesis is stated as the following:

H₁₇: Ceteris paribus, there is a positive relationship between non-Royal family ownership and firm performance.

4.3.3.3 Government Ownership

When the government holds shares in a firm or is regarded as one of the firm's key shareholders, this is known as government ownership. (Feng, *et al.*, 2004; Ramirez & Ling, 2003). Among other ownerships, government ownership is recognised as a key CG element enhancing firm performance owing to the fact that government ownership is more influential than other ownerships in such firms. This can result in a greater level of monitoring characteristics, as well as opportunistic behaviour mitigation (Demsetz, 1983; & Shleifer & Vishny, 1986).

Empirical evidences by researchers, Aussenegg and Jelic (2003); Mak and Li (2001); Sun *et al.* (2002) have shown a notable positive link between firm performance and government ownership. In addition, it was reported by Ang and Ding (2006) that government-linked organisations show greater market valuation when compared with non-government-linked firms in the context of Singapore, when considering the particular nature of government-owned firms and ongoing government supervision.

Locally, with regard to the Emirates, which is known to be a comparable setting to Saudi Arabia, the government has notable ownership in a number of listed companies. Accordingly, it is easier for such firms to achieve financing from different sources and feel less pressure to conform with the criteria of financial reporting, which could ultimately provide management with room to choose from those accounting options that enhance the performance of the firm (Aljifri & Moustafa, 2007). However, it has been detailed by Aljifri and Moustafa (2007) that there is a positive link between firm performance and government ownership in the context of UAE-operating firms.

On various occasions, those government-controlled businesses that perform well may achieve positive financial outcomes in the sense that government budgets are commonly utilised in order to save larger government-owned entities (Saidi, 2011).

Based on the above discussion, the present study expects a direct association between government ownership and firm performance. The testable hypothesis is stated as the following:

H₁₈: Ceteris paribus, there is a positive relationship between government ownership and firm performance.

4.3.3.4 Domestic Corporate Ownership

The growth of owners as largest shareholders in companies leads to decreased agency costs (Jensen & Meckling, 1976), because these holdings in companies provide evidence to support the view that company ownership delivers a number of important advantages to firms involved in specific business agreements by decreasing the costs of monitoring the

ventures or alliances between firms and their corporate blockholders (Allen & Phillips, 2000; Claessens *et al.*, 2000). In addition, the requirement of managing earnings needs to lessen contractual restrictions, which would stimulate and inspire controlling owners to enhance earnings informativeness.

Chhibber and Majumdar (1999); Djankov and Hoekman (2000); Khanna and Palepu (2000) suggested that greater degrees of resources—financial, organisational and technical—are delivered by domestic investors. In addition, the supervision roles of local investors are commonly impacted by local business and governmental relations and networks (Claessens *et al.*, 2000; Dharwadkar, George & Brandes, 2000; Douma *et al.*, 2006).

Motivated by the above discussion, the present study expects a direct association between domestic corporate ownership and firm performance. The testable hypothesis is expressed in this expectation:

H₁₉: Ceteris paribus, there is a positive relationship between domestic corporate ownership and firm performance.

4.4 Measurements of Variables

This study consists of three categories of variables: dependent variables, independent variables, and control variables. Each variable in these three categories requires certain measurement.

4.4.1 Dependent Variables

Firm performance is the dependent variable that is measured using market-based measurement, and accounting-based measurement. Tobin's Q (TOBINS_Q) represents market-based measurement and Return on Assets (ROA) and Return on Equity (ROE) represent accounting-based measurements. TOBINS_Q (ratio of the market) is measured as the market value of equity plus the book value of the debt divided by the book value of the total assets (Aljifri & Moustafa, 2007; Amran, 2010; Dogan, *et al.*, 2013; McConnell & Servaes, 1990; Morck *et al.*, 1988; Vafeas, 1999).

ROA is measured as net income divided by book value of total assets (Alzharani *et al.*, 2011; Anderson & Reeb, 2003; Bhagat & Bolton, 2008; Maury, 2006; Yermack, 1996).

ROE is measured as net income divided by shareholders' equity (Alzharani, *et al.*, 2011; Anderson & Reeb, 2003; Arslan, *et al.*, 2010; Maury, 2006).

4.4.2 Independent Variables

The independent variables in this research consist of three main groups: board of directors effectiveness, audit committee effectiveness, and ownership structure.

4.4.2.1 Board of Directors Effectiveness

Board of directors effectiveness in this study is measured as an individual and a combined measure. The individual measurement of board of directors effectiveness is determined by identifying the effectiveness of each individual characteristic and how the effectiveness of each individual characteristic can enhance firm performance. These include board Royal family members, board size, board independence, board meetings, CEO duality, and board

multiple directorships. As for the combined measurement of the board of directors' effectiveness, this measurement is calculated by summing the value of the seven individual characteristics into one score and determining how this score can be effective in enhancing firm value.

4.4.2.1.1 Board Royal Family Members

The measurement of board Royal family members (BD_RFAMILY) is identified as the number of Royal family members on the board. For the purposes of constructing the board of directors' effectiveness characteristics composite, BD_RFAMILY is coded "1" if the number of BD_RFAMILY on the board is equal to or higher than the sample median¹¹, and "0" otherwise.

4.4.2.1.2 Board Size

Board size (BD_SIZE) is measured as the total number of directors sitting on the board who are not on the audit committee. This measurement was previously used by Lee *et al.* (2004). For the purposes of constructing the effect of board of directors' characteristics composite, BD_SIZE is coded "1" if the number of the members on the board is equal to or higher than the sample median, and "0" otherwise.

4.4.2.1.3 Board Independence

Board Independence (BD_INDE) is measured as the percentage of independent non-executive directors on the board who are not on the audit committee divided by total

¹¹ The median can be considered the better measurement for central tendency and can be considered the most typical value if a set of scores has an outlier (Hair et al., 2006). In this study the median is used as a cut off to determine the effectiveness of board characteristics and audit committee characteristics to avoid significant misrepresentation of the results.

directors. This measurement was previously used by prior studies such as Amran and Che Ahmad (2009; 2010); Cicero *et al.* (2010); Uadiale (2010); Zainal Abidin *et al.* (2009). For the purposes of constructing the effect of board of directors' characteristics composite, BD_INDE is coded "1" if the percentage of the BD_INDE on the board is equal to or higher than the sample median, and "0" otherwise.

4.4.2.1.4 Board Meetings

Board meetings (BD_MEETS) are measured as the number of board of directors' meetings during the year. This measurement was previously used by prior studies such as Al-Ghamdi (2012); Karamanou and Vafeas (2005); Vafeas (1999). For the purposes of constructing the effect of board of director's characteristics composite, BD_MEETS is coded "1" if the number of BD_MEETS during the year is equal to or higher than the sample median, and "0" otherwise.

4.4.2.1.5 Board Financial Knowledge

Board financial knowledge (BD_FINKNOW) is measured as the percentage of qualified members in accountancy or finance on the board who are not on the audit committee divided by total directors. This measurement was previously used by prior studies such as Chen *et al.* (2005); Switzer and Huang (2007). For the purposes of constructing the effect of board of directors' characteristics composite, BD_FINKNOW is coded "1" if the percentage of qualified members in accountancy or finance on the board is equal to or higher than the sample median, and "0" otherwise.

4.4.2.1.6 CEO Duality

CEO duality (*CEO_DUAL*) is measured as a dummy variable equal to “1” if the firm’s CEO_DUAL is also the chair of board of directors, and “0” otherwise. This measurement was previously used by prior studies such as Amran (2010); Lee *et al.* (2004); Wong and Yek (1991). For the purposes of constructing the effect of board of directors’ characteristics composite, *CEO_DUAL* is coded “1” if the CEO_DUAL is not the chairperson of the board, and “0” otherwise.

4.4.2.1.7 Board Multiple Directorships

Board multiple directorships (*BD_MDIR*) is measured as the percentage of directors having more than one directorship in publicly-listed companies who are not on the audit committee. This measurement was previously used by prior studies such as Ferris *et al.* (2003); Latif *et al.* (2013). For the purposes of constructing the effect of board of director characteristics composite, *BD_MDIR* is coded “1” if the percentage of *BD_MDIR* on the board is equal to or higher than the sample median, and “0” otherwise.

4.4.2.1.8 Board of Directors’ Effectiveness Score

Board of directors’ effectiveness score (*BDE_SCORE*) is a composite measure that sums the value of the above-mentioned seven dichotomous characteristics of the board to establish a certain measurement for each board-firm effectiveness score that takes a score bounding by 0-1. The higher the score, the higher the effectiveness of the board of directors.

In terms of the board of directors' effectiveness score (*BDE_SCORE*), the score is a composite measure that sums the value of the seven dichotomous characteristics of the board to create a firm-specific summary measure of its board of directors' effectiveness that takes a score bounded by 0-1. The higher the score, the higher the effectiveness of the board of directors. The seven binary characteristics that are included in this measurement are: board independence, board financial expertise, board size, board meetings, CEO duality, board nationality, and board international experience, ranging from 0 to 7. By using an aggregated measure to combine board of directors' characteristics as a score of effectiveness (board Royal family members, board size, board independence, board meetings, board financial knowledge, CEO duality, and board multiple directorships) as suggested by Agrawal and Knoeber (1996), the results associated with the individual mechanism's impact could be flawed as the effects of various single mechanisms is weakened in the combined model. In this same vein, the measurement of the combined impact suggests strong impacts when contrasted alongside the measurement of individual impacts (O'Sullivan *et al.*, 2008).

Table 4.3

Calculating Board of directors' Effectiveness Score (BDE_SCORE)

BDE_SCORE	Board of directors' effectiveness score calculated by "1-0" the higher the score, the higher the effectiveness of the board.
BD_RFAMILY	Board Royal family member is coded "1" if the number of Royal family members on the board is equal to or higher than the sample median, and "0" otherwise (agency theory).
BD_SIZE	Board size is coded "1" if the total number of directors sitting on the board who are not on the audit committee is equal to or higher than the sample median, and "0" otherwise (resource dependence theory).
BD_INDE	Board of directors' independence is coded "1" if the percentage of independent non-executive directors who are not on the audit committee is equal to or higher than the sample median, and "0" otherwise (agency theory).
BD_MEETS	Board meetings are coded "1" if the number of board of directors meetings during the year is equal to or higher than the sample median, and "0" otherwise (agency theory).
BD_FINKNOW	Board financial background member is coded "1" if the percentage of qualified members in accountancy or finance who are not on the audit committee is equal to or higher than the sample median, and "0" otherwise (agency theory).
CEO_DUAL	CEO duality is coded "1" if the firm's CEO is also the chair of board of directors, and "0" otherwise (stewardship theory).
BD_MDIR	Board multiple directorship is coded "1" for the percentage of directors having more than one directorship in publicly-listed companies who are not on the audit committee, and "0" otherwise (stewardship theory).

4.4.2.2 Audit Committee Effectiveness

Audit committee effectiveness in this study is measured as an individual and a combined measure. The individual measurement of audit committee effectiveness is determined by identifying the effectiveness of each individual characteristic and how the effectiveness of each individual characteristic can enhance firm performance. These include audit committee outside financial expertise, audit committee multiple directorships, audit committee size, audit committee independence, audit committee meetings, and audit committee financial expertise. As for the combined measurement of the audit committee effectiveness, this measurement is calculated by summing the value of the six individual characteristics into one score and how this score can be effective in enhancing firm value.

4.4.2.2.1 Audit Committee Outside Financial Expertise

The measurement of audit committee outside financial expertise (AC_OUTFINEX) is identified the percentage of outside members on the audit committee who are expert in accountancy or finance divided by total members. For the purposes of constructing the audit committee outside financial expertise, AC_OUTFINEX is coded “1” if the percentage of outside members on the audit committee who are expert in accountancy or finance divided by total members is equal to or higher than the sample median, and “0” otherwise.

4.4.2.2.2 Audit Committee Multiple Directorships

Audit committee multiple directorships (AC_MDIR) is measured as the percentage of audit committee members having more than one directorship in publicly-listed companies’ board or audit committee divided by total members. This measurement was previously used by prior studies such as Aldamen, *et al.* (2012), who found a positive relationship between audit committee multiple directorships and firm performance. For the purposes of constructing the effect of audit committee multiple directorships’ characteristics composite, AC_MDIR is coded “1” if the percentage of AC_MDIR on the board is equal to or higher than the sample median, and “0” otherwise.

4.4.2.2.3 Audit Committee Size

Audit committee size (AC_SIZE) is measured as the total number of members sitting on the audit committee. This measurement was previously used by prior studies such as Raghunandan and Rama (2007), who found a positive association between firm

performance and audit committee size. For the purposes of constructing the effect of audit committee characteristics composite, AC_SIZE is coded “1” if the number of the members on the audit committee is equal to or higher than the sample median, and “0” otherwise.

4.4.2.2.4 Audit Committee Independence

Audit committee independence (AC_INDE) is measured as the percentage of independent non-executive members on the audit committee divided by total members. This measurement was previously used by prior studies such as Anderson *et al.* (2004) and Klein (1998; 2002). For the purposes of constructing the effect of audit committee independence characteristics composite, AC_INDE is coded “1” if the percentage of the AC_INDE on the audit committee is equal to or higher than the sample median, and “0” otherwise.

4.4.2.2.5 Audit Committee Meetings

Audit committee meetings (AC_MEETS) are measured as the number of audit committee meetings during the year. This measurement was previously used by prior studies such as Abdul Rahman and Mohamed Ali (2006); Anderson *et al.* (2004); Kent *et al.* (2010); Kent and Stewart (2008); Xie *et al.* (2003). For the purposes of constructing the effect of audit committee characteristics composite, AC_MEETS is coded “1” if the number of BBD_MEETS during the year is equal to or higher than the sample median, and “0” otherwise.

4.4.2.2.6 Financial Expertise

Audit committee financial expertise (AC_FINEX) is measured as the percentage of qualified members in accountancy or finance on the audit committee divided by total members. This measurement was previously used by prior studies such as Chan and Li (2008); Krishnan and Visvanathan (2009); Naiker and Sharma (2009); Raghunandan and Rama (2007); Rainsbury *et al.* (2009). For the purposes of constructing the effect of audit committee characteristics composite, AC_FINEX is coded “1” if the percentage of qualified members in accountancy or finance on the audit committee is equal to or higher than the sample median, and “0” otherwise.

4.4.2.2.7 Audit Committee Effectiveness Score

Audit committee effectiveness score (ACE_SCORE) is a composite measure that sums the value of the above mention six dichotomous characteristics of the audit committee to establish a certain measurement for each audit committee-firm effectiveness score that takes a score bounded by 0-1. The higher the score, the higher the effectiveness of the audit committee. In terms of the *ACE_SCORE*, the score is a composite measure that sums the value of the six dichotomous characteristics of the audit committee to create a firm-specific summary measure of its audit committee effectiveness that takes a score bounded by 0-1. The higher the score, the higher the effectiveness of the audit committee. The six binary characteristics that are included in this measurement are: audit committee outside financial expertise, audit committee multiple directorships, audit committee size, audit committee independence, audit committee meetings, and audit committee financial expertise, ranging from 0 to 6. By using an aggregated measure to combine audit

committee characteristics as a score of effectiveness (audit committee outside financial expertise, audit committee multiple directorships, audit committee size, audit committee independence, audit committee meetings, and audit committee financial expertise) as suggested by Agrawal and Knoeber (1996) and Ward *et al.* (2009), the results associated with the individual mechanism's impact could be flawed as the effects of various single mechanisms is weakened in the combined model. In this same vein, the measurement of the combined impact suggests strong impacts when contrasted alongside the measurement of individual impacts (O'Sullivan *et al.*, 2008).

Table 4.4

Calculating Audit Committee Effectiveness Score (ACE_SCORE)

ACE_SCORE	Audit committee effectiveness score calculated by “1-0”; the higher the score, the higher the effectiveness of the audit committee.
AC_OUTFINEX	Audit committee outside financial expertise is coded “1” if the financial background percentage of outside members is equal to or higher than the sample median, and “0” otherwise (agency theory).
AC_MDIR	Audit committee multiple directorship is coded “1” if the percentage of audit committee members having more than one directorship in publicly-listed companies is equal to or higher than the sample median, and “0” otherwise (agency theory).
AC_SIZE	Audit committee size is coded “1” if total number of members sitting on the audit committee is equal to or higher than the sample median, and “0” otherwise (agency theory).
AC_INDE	Audit committee independence is coded “1” if the percentage of independent non-executive directors is equal to or higher than the sample median, and “0” otherwise (agency theory).
AC_MEETS	Audit committee meetings are coded “1” if the number of audit committee meetings during the year is equal to or higher than the sample median, and “0” otherwise (agency theory).
AC_FINEX	Insider financial expertise member is coded “1” if the percentage of qualified members in accountancy or finance is equal to or higher than the sample median, and “0” otherwise (agency theory).

4.4.2.3 Ownership Structure

Ownership structure effectiveness in this study is determined by identifying the effectiveness of each individual characteristic and how the effectiveness of each individual characteristic can enhance firm performance. These include Royal family ownership, non-Royal family ownership, government ownership and domestic ownership.

4.4.2.3.1 Royal Family Ownership

Royal family ownership (RF_OWN) is measured as the percentage of the ordinary shares held by Royal family members. The measurement of the effect of RF_OWN depend on other studies as Clark (2004), which stated that Royal family members have greater power to influence the behaviour of others to get things done properly, and Che Ahmad *et al.* (2006) ethnic groups in Malaysia on the choice of auditors among Malaysian publicly-listed companies. Their measurements depend on the proportion of total Chinese, Bumiputra, and foreign substantial shareholders to total substantial shareholders.

4.4.2.3.2 Non-Royal Family Ownership

Non-Royal family ownership (NRF_OWN) is measured as the percentage of ordinary shares held by non-Royal family members. The measurement of the effect of NRF_OWN depends on other studies such as Chu (2011); Maury (2006); Villalonga and Amit (2006); Wiwattanakantang (2001).

4.4.2.3.3 Government Ownership

Government ownership (GOV_ OWN) is measured as the percentage of ordinary shares held by the government and its agencies. The measurement of the effect of GOV_OWN depends on other studies such as Aljifri and Moustafa (2007); Hovey *et al.* (2003); Saidi (2011).

4.4.2.3.4 Domestic Ownership

Domestic ownership (DOMESTIC_OWN) is measured as the percentage of ordinary shares held by domestic corporations. The measurement of the effect of DOMESTIC_OWN depends on other studies such as Douma *et al.* (2006); Khanna and Palepu (2000).

Table 4.5

Summary of operationalization and the expected sign of the ownership structure for firm performance

Variable	Acronym	Operationalization	Coefficient Predictions	The theory
Dependent Variable				
Firm performance	PERFORMANCE	TOBINS_Q, ROA & ROE	D.V	--
Independent Variables				
Royal Family Ownership	RF_OWN (H_{16})	Percentage of ordinary shares held by Royal family members	+	Agency theory
Non-Royal Family Ownership	NRF_OWN (H_{17})	Percentage of ordinary shares held by the non-Royal family members	+	Agency theory
Government Ownership	GOV_OWN (H_{18})	Percentage of ordinary shares held by government and its agencies	+	Agency theory
Domestic Corporations	DOMESTIC_OWN (H_{19})	Percentage of ordinary shares held by domestic corporations	+	Agency theory

4.4.3 Control Variables

In addition to the independent variables highlighted earlier, various control variables are also included in this study in order to take into account the characteristics of firms that could impact the degree of firm performance. Such elements are recognised as critical to ensuring the tests focus specifically on the differences created by variations in the link

between firm performance and CG. The findings would be complicated and disorderly if their impacts were not controlled (Aljifri & Moustafa, 2007; Sharma, 2004). In consideration of prior research carried out in the field of firm performance, six controlling variables are adopted in this study with regard to the impact of possible confounding factors. These include firm size (Aljifri & Moustafa, 2007; Ghosh, 2001; Helmich, 1977; Kumar, 2004; Pfeffer & Salancik, 1978), leverage (Grossman & Hart, 1982; Nickell, Nicolitsas & Dryden, 1997), firm age (Stinchcombe, 1965; Evans, 1987b; Ward & Mendoza, 1996), management change (Conyon, 1998; Dahya, McConnell & Travlos, 2002; Furtado & Karan, 1990; McIntosh & Gonzalez-Lima, 1994), financial crisis (Johnson, Boone, Breach & Friedman, 2000), and market penalty (Jarrell & Peltzman, 1985; Karpoff, Lott & Rankine, 1999; Klein & Leffler, 1981; Peltzman, 1981). Through ensuring these variables are controlled, it is held that there is some degree of impact on the link between firm performance and CG characteristics.

4.4.3.1 Firm Size

In the empirical literature of CG, firm size has been adopted as a control variable impacting the performance of the firm (Aljifri & Moustafa, 2007; Alzharani *et al.*, 2011). Ghosh (2001) suggests that larger firms perform better than smaller ones owing to their capacity to achieve risk diversification. In this same regard, it is held by Helmich (1977) and Kumar (2004) that larger entities are more effective than smaller ones due to skills of staff, economies of scale, and market power. With this noted, it is stated by Haniffa and Hudaib (2006) that larger organisations have more analysts available who are centered on the performance of the firm and, as such, are under greater pressure to perform well. In line with this argument, a positive link between firm performance and firm size is

empirically reported by Aljifri and Moustafa (2007). Furthermore, Pfeffer and Salancik (1978) suggest that larger firms are more influential over their environments in comparison to smaller ones, and are concurrently more likely to recruit the assistance of larger resources and fundamental constituencies in order to involve outside consultants for support in enabling the succession planning. Accordingly, in this research, firm size (FSIZE) is measured as Log_{10} of the total assets, which positively affects firm performance.

4.4.3.2 Leverage

Debt or leverage is the utilisation of borrowed funds in an attempt to enhance firm performance. This could decrease agency costs by lessening the cash flows available for the expropriation of negative net present value projects and opening the business to greater supervision by the market. This could increase management pressure in terms of enhancing firm performance as it decreases the moral risk through lessening free cash flow at the disposal of management (Alzharani *et al.*, 2011; Jensen, 1986; Harris & Raviv, 1991; Myers, 1990). For instance, Grossman and Hart (1982) detailed the fact that debt financing means management is more aware of consuming fewer perks, and ultimately become more effective in circumventing bankruptcy, and thus the loss of reputation and control.

Moreover, the risks apparent as a result of failure to pay off debts acts as an efficient motivational force and means firms are more effective (Bhandari & Weiss, 1996). Nickell *et al.* (1997) noted a positive association between productivity development and financial pressure. Moreover, a positive link between leverage and firm performance is detailed by

Hurdle (1974). In this research, leverage (LEV), which is measured as total debt to total assets, has a positive link with the performance of the firm.

4.4.3.3 Firm Age

The age of the firm is a critical factor in firm development, firm dissolution likelihood, and the variability of business growth (Evans, 1987a). The link between firm performance and firm age has been detailed well, with some research utilising age as a proxy for the experience a firm has gained through its business (Geroski, 1995). With the increase of firm age, management garners much more insight into their abilities and skills over time (Stinchcombe, 1965; Evans, 1987b). Younger firms are more vulnerable with firm age expected to last only between five and 10 years, as noted by Ward and Mendoza (1996).

The main point to be made in this regard is that established approaches, organisational norms, and routines in older firms restrict the translation of entrepreneurial actions and activities into positive performance outcomes. This implies that longer-established entities may experience problems in overcoming age-related contextual factors, regardless of their implementation of a strategy-making approach that is otherwise encouraging in fulfilling positive firm development. In this study, therefore, there is a positive link between firm performance and firm age (FAGE), measured as the number of years since the establishment of the company.

4.4.3.4 Management Change

An organisation experiences a number of critical incidents throughout the course of its operation, both positive and negative, all of which can result in management change,

namely through changes in executive management or board structure (Fee & Hadlock, 2003; Price *et al.*, 2011). It has been well-documented that the value of human capital is increased by directors, which ultimately depends on their performance as decision makers, by improving their standing as decision control professionals (Fama, 1980; Fama & Jensen, 1983). On the other hand, however, a number of other elements imply that directors will not necessarily act in the interest of the shareholders; for instance, external directors could owe their standing to management who primarily suggested their role (Hart, 1995). Secondly, multiple and interlocking directorships could decrease the overall efficiency of external directors (Hart, 1995; Patton & Baker, 1987). Lastly, directors might not own a significant portion of the firm's equity, meaning they may have little to gain personally as a result of firm performance improvements (Hart, 1995; Jensen, 1993).

An in-depth review and summary of the numerous empirical research of the causes, consequences, and marketing impacts of management turnover, with regard to characteristic firms, was provided by Furtado and Karan (1990). Research analysed internal forces centered on monitoring management performance, such as through the board of directors (Fama, 1980), competing management (Fama & Jensen, 1983), and block shareholders (Shleifer & Vishny, 1986). Findings highlight an inverse link between management turnover and firm performance (Warner, Watts & Wruck, 1988). McIntosh, and Gonzalez-Lima (1994) carried out a joint test centered on the postulation that data relating to management performance can be seen through stock returns, with return data then directed towards assessing performance. A negative CEO turnover–corporate performance relation for UK firms was documented by Conyon (1998) and Dahya *et al.* (2002). Accordingly, management change (MCHANG) measured as a dichotomous

variable, coded “1” if board members have changed and “0” if not, has an inverse link with regard to firm performance.

4.4.3.5 Financial Crisis

Owing to the financial crisis witnessed in 2008 and 2009, which impacted a number of countries, shareholders expressed various concerns with regard to investment returns. Prior research has documented that there is a negative link between firm performance and financial crisis (Gonenc & Aybar, 2006; Mitton, 2002; Lemmon & Lins, 2003; Rajan & Zingales, 1998). Agency problems are likely to be seen as more fundamental throughout the period of crisis as this could induce a greater number of firms to experience financial problems, meaning greater vulnerability to agency problems, particularly those between bondholders and shareholders (Jensen & Meckling, 1976). Moreover, Johnson *et al.* (2000) argued that management is likely to take ownership of minority shareholders throughout a period of crisis with the fall of expected return on investment. It is recognised that the efficiency of protection with regard to minority shareholders in 25 emerging markets, decreased to a greater degree of the variation in stock market performance and exchange rates during the Asian crisis. Although a number of different economies have been negatively and fundamentally impacted by the worldwide financial crisis, 2008 and 2009 were the years during which the Saudi market experienced the crisis (Aldamen, *et al.*, 2012; Al-Hamidy, 2010). As a result, a notable vulnerability in regard to non-adherence to regulations, as well as a lack of accountability, disclosure, and transparency, has been highlighted in Saudi Arabia (Saudi Accountancy Journal, 2008). Accordingly, financial crisis (FCRIS, measured as a binary variable with “1” if the years are 2008 and 2009 and “0” otherwise) negatively impacts firm performance.

4.4.3.6 Market Penalty

The stock market plays a critical role as a monitoring body in controlling the financial reporting processes of publicly-traded companies. This is one of the critical approaches to monitoring and ensuring the interests of the related parties of the firm. In this regard, firms that violate any market regulations could become susceptible to penalties that cause their reputation, and ultimately firm value in the marketplace, to be ruined. In this vein, Klein and Leffler (1981) held that reputation disciplines certain types of wrongdoing because market transactions internalise their costs. Companies could lose sales when, for example, they cheat their customers; those cheating staff or suppliers could also face lost trade credit or greater input costs. Costs related to illegal activity are internalised as the cheating firm will face losses with customers, staff, or suppliers, as well as other entities and individuals. In line with these views, prior studies suggest that reputational costs include lack of safety (Mitchell & Maloney, 1989), deceptive bidding practices (Smith, 1992), punitive damages lawsuits (Karpoff & Lott, 1999), defense procurement fraud (Karpoff, Lee & Vondrzyk, 1999), and financial misrepresentation (Karpoff, Lee & Martin, 2004). Peltzman (1981) provides proof to support the belief that publicly-traded firms experience significant losses in standing when targeted by the Federal Trade Commission for potentially abusing regulations through misleading and false advertisements.

The direct costs of defective product recalls have been contrasted with losses in shareholder wealth, according to Jarrell and Peltzman (1985), who stated that shareholder wealth losses outweigh direct recall costs. Moreover, the work of Karpoff *et al.* (1999) suggested that news of a public corporation's involvement in fraud ultimately impacts shareholder wealth. More specifically, firms fined by market authorities as a result of

violating market regulations experience firm value losses. For example, in the context of Saudi Arabia, a 100,000 Saudi riyals penalty has been imposed on the fixed-line operator, along with Buruj Cooperative Insurance Company, Al-Baha Investment & Development, Allied Cooperative Insurance and Saudi Fisheries, by the CMA as a result of their “violation of clause (A) of Article (45) of the Capital Market Law and clause (E) of Article (26) of the Listing Rules.” The organisations did not adhere to the need to inform the CMA or to declare to shareholders their financial statements for the period ending December 31, 2011. Accordingly, market penalty (*MPENAL*), measured as a binary variable with “1” if the company receives a market penalty and “0” otherwise, negatively impacts firm performance.

Table 4.6

Summary of operationalization and the expected sign of the control variables for firm performance

Variable	Acronym	Operationalization	Coefficient Predictions	The theory
Dependent Variable				
Firm performance	PERFORMANCE	TOBINS_Q, ROA & ROE	D.V	--
Control Variables				
Firm Size	FSIZE	<i>Log10</i> of the total assets	+	Agency theory
Leverage	LEV	Total debt to total assets	+	Agency theory
Firm Age	FAGE	The number of years since the company was established	+	Agency theory
Mchang	MCHANG	A dummy variable, coded "1" if there is a change in board members and "0" otherwise	-	Agency theory
Financial Crises	FCRIS	A dummy variable coded "1" if the years are 2008 and 2009 and "0" otherwise	-	Agency theory
Market Penalty	MPENAL	A dummy variable coded "1" if the company receives a market penalty and "0" otherwise	-	Agency theory

4.5 Models Specification

Frameworks of agency theory, stewardship theory, and resource dependence theory are used to develop two models, in order to test the relationship between CG mechanisms and firm performance. Model 1 tests the relationship between CG mechanisms as individual (board of directors effectiveness, audit committee effectiveness and ownership structure) and firm performance. Model 2 measures the relationship between board of directors' effectiveness score audit committee's effectiveness score and ownership structure on one side and firm performance on the other side. The following Models are utilized:

Model 1:

$$\begin{aligned} \text{Firm Performance}_{it} = & \beta_0 + \beta_1 \text{BD_RFAMILY}_{it} + \beta_2 \text{BD_SIZE}_{it} + \beta_3 \text{BD_INDE}_{it} + \beta_4 \\ & \text{BD_MEETS}_{it} + \beta_5 \text{BD_FINKNOW}_{it} + \beta_6 \text{CEO_DUAL}_{it} + \beta_7 \text{BD_MDIR}_{it} + \beta_8 \\ & \text{AC_OUTFINEX}_{it} + \beta_9 \text{AC_MDIR}_{it} + \beta_{10} \text{AC_SIZE}_{it} + \beta_{11} \text{AC_INDE}_{it} + \beta_{12} \text{AC_MEETS}_{it} \\ & + \beta_{13} \text{AC_FINEX}_{it} + \beta_{14} \text{RF_OWN}_{it} + \beta_{15} \text{NRF_OWN}_{it} + \beta_{16} \text{GOV_OWN}_{it} + \beta_{17} \\ & \text{DOM_OWN}_{it} + \beta_{18} \text{FSIZE}_{it} + \beta_{19} \text{LEV}_{it} + \beta_{20} \text{FAGE}_{it} + \beta_{21} \text{MCHANG}_{it} + \beta_{22} \text{FCRIS}_{it} + \\ & \beta_{23} \text{MPENAL}_{it} + e_i + u_{it} \end{aligned} \quad (\text{Equation 4.1})$$

Model 2:

$$\begin{aligned} \text{Firm Performance}_{it} = & \beta_0 + \beta_1 \text{BDE_SCORE}_{Y_{it}} + \beta_2 \text{ACE_SCORE}_{it} + \beta_3 \text{RF_OWN}_{it} + \beta_4 \\ & \text{NRF_OWN}_{it} + \beta_5 \text{GOV_OWN}_{it} + \beta_6 \text{DOM_OWN}_{it} + \beta_7 \text{FSIZE}_{it} + \beta_8 \text{LEV}_{it} + \beta_9 \text{FAGE}_{it} \\ & + \beta_{10} \text{MCHANG}_{it} + \beta_{11} \text{FCRIS}_{it} + \beta_{12} \text{MPENAL}_{it} + e_i + u_{it} \end{aligned} \quad (\text{Equation 4.2})$$

Where:

Dependant Variable:

FPEFORMANCE: firm performance = measured using three different proxies one related to market-based performance measurement (TOBINS_Q) and two related to accounting-based performance measurement (ROA and ROE).

- TOBINS_Q: ratio of the market = the market value of equity plus the book value of the debt divided by the book value of the total assets.
- ROA: return on assets = net income divided by book value of total assets.
- ROE: return on equity = net income divided by shareholders' equity.

Independent Variables:

- BD_RFAMILY: Royal family members = the number of Royal family members on the board.
- BD_SIZE: board size = total number of directors sitting on the board who are not on the audit committee.
- BD_INDE: independent directors = the percentage of independent non-executive directors who are not on the audit committee divided by total directors.
- BD_MEETS: board meetings = the number of board of directors meetings during the year.
- BD_FINKNOW: board financial knowledge = the percentage of qualified members in accountancy or finance who are not on the audit committee divided by total directors.
- CEO_DUAL: CEO duality = a dummy variable equal to “1” if the firm’s CEO is also the chair of board of directors, and “0” otherwise
- BD_MDIR: multiple directorships = the percentage of directors having more than one directorship in publicly-listed companies who are not on the audit committee.
- AC_OUTFINEX: outside financial expertise = percentage of outside members on the audit committee who are expert in accountancy or finance divided by total members.
- AC_MDIR: audit committee multiple directorships = the percentage of audit committee members having more than one directorship on publicly-listed companies’ board or audit committee divided by total members.

- AC_SIZE: audit committee size = total number of members sitting on the audit committee
- AC_INDE: audit committee independence = the percentage of independent non-executive members on the audit committee divided by total members.
- AC_MEETS: audit committee meetings = the number of audit committee meetings during the year.
- AC_FINEX: financial expertise of the audit committee member = the percentage of qualified members in accountancy or finance on the audit committee divided by total members.
- RF_OWN: Royal family ownership = percentage of the ordinary shares held by the Royal family members.
- NRF_OWN: family ownership = percentage of the ordinary shares held by non-Royal family members.
- GOV_ OWN: government ownership = percentage of ordinary shares owned by government.
- DOMESTIC_OWN: domestic corporates ownership = percentage of ordinary shares held by domestic corporations.
- BDE_SCORE: board of director's effectiveness score = bounded by "0-1," with a higher score indicating a higher effectiveness of the board.
- ACE_SCORE: audit committee effectiveness score = bounded by "0-1," with a higher score indicating a higher effectiveness of the audit committee.
- FSIZE: firm size = will be measured as \log_{10} of total assets.
- LEV: leverage = will be measured as long term debt-to-total asset ratio.
- FAGE: firm age = the number of years since the company was established.

- MCHANG: management change = a dummy variable, coded “1” if there is a change in board members and “0” otherwise
- FCRIS: financial crisis = a dummy variable with “1” if the years are 2008 and 2009, and “0” otherwise
- MPENAL: market penalty = a dummy variable with “1” if the company receives a market penalty and “0” otherwise.
- e = Error term
- u = composite error for the estimation.
- i =indicating data for the i firm
- t =time

It should be noted that some variables are dummy variables such as CEO duality, Management change, financial crisis and market penalty. Some variables are integer numbers such as Royal family members, board size, board meetings, audit committee size, audit committee meetings and firm age. Other variables are percentage such as independent directors, board financial knowledge, multiple directorships, outside financial expertise audit committee multiple directorship audit committee financial expertise, Royal family ownership, non-Royal family ownership, government ownership, domestic corporate and leverage. Firm size represents \log_{10} of total assets.

4.6 Data Collection

4.6.1 Sample Selection

This thesis used panel data study to all publicly-listed companies in Tadawul from 2007 to 2011. Using panel data for the five consecutive years, where the same companies serve on

the panel over five years, gives advantage to measurement of the changes that take place between points in time (Cavana, *et al.*, 2001). Choosing years between 2007 and 2011 encompasses many important events such as financial crisis (either locally or internationally) and introducing the Saudi CG code in 2006. The initial sample in this study was 622 observations and the final sample was 573 observations, after 49 outlier observations were discarded. Further, the results produced are more robust, consistent, and more stable to make a generalisation to the population so that it is more representative and meaningful. Table 4.7 shows the number of companies in sectors listed in the Tadawul between years 2007- 2011.

Table 4.7
Analysis of the sample

No.	Sectors	Number of companies per years					
		2007	2008	2009	2010	2011	
1	Banks & Financial Services	10	10	11	11	11	
2	Petrochemical Industries	10	13	14	14	14	
3	Cement	8	8	8	9	10	
4	Retail	7	8	9	9	10	
5	Energy and Utilities	2	2	2	2	2	
6	Agriculture and Food Industries	12	13	13	14	14	
7	IT and Telecommunications	2	3	3	4	4	
8	Insurance	1	17	21	27	28	
9	Multi Investment	5	7	7	7	7	
10	Industrial Investment	8	11	11	13	13	
11	Building and Construction	11	12	13	13	15	
12	Real Estate Development	6	8	8	8	8	
13	Transportation	3	3	3	3	4	
14	Media and Publishing	3	3	3	3	3	
15	Hotels and Tourism	2	2	2	2	2	
	Total	90	120	128	139	145	
Total observation							622
Observations discarded (outliers) ¹²							(49)
Final sample							573

¹² Outliers as a result of some observations have extreme value with Tobin's Q, ROA or ROE. Some observations have one variable or more contains extreme value such as leverage and company size.

4.6.2 Procedures

Due to the nature of this study that finds the effect of CG mechanisms on firm performance, secondary data is used in gathering the data. Secondary data consist of both qualitative and quantitative data that can be used in both explanatory and descriptive research (Kervin, 1999). Secondary data using annual reports published by listed companies in Tadawul would give strength to the data that can be used. Data in the annual reports are consistent because there are no changes after annual auditing, and accurate because they are audited by accounting firms and are subject to public scrutiny. The data in the annual reports of the companies were downloaded from www.tadawul.com.sa. The financial database was downloaded from the Thomson Advance Database (available at Sultanah Bahiyah Library, Universiti Utara Malaysia). However, the primary advantages of secondary data are saving resources (money & time), obtaining higher-quality data, and being checked relatively easily by others (Ghauri & Gronhaugh, 2002; Zikmund, Carr & Griffin, 2012). This study is based on data collected by hand from the companies' annual reports for financial years 2007 to 2011. Accuracy of the data is the important thing during data collection. In order to promote data accuracy, data was cross-referenced with other sources whenever possible. In the annual reports, data relating to the directors' report, financial statements, and notes was scrutinised using Thomson Advance Database.

4.7 Summary and Conclusion

This chapter is consistent with the aim of this thesis to find a relationship between CG mechanisms and firm performance. It concentrates on four main issues. The first part discussed the theoretical framework of this thesis through two models. The first model

examines the relationship between the characteristics of the board of directors, characteristics of the audit committee, and structure of ownership on one side and firm performance on the other side. The second model examines the relationship between board of directors' effectiveness score, audit committee effectiveness score, and structure of ownership on one side and firm performance on the other side.

The second part of this chapter concentrates on the development of 19 hypotheses and the measurements of variables (dependent and independent). The specification of the two models is discussed in part three of this chapter. Finally, part four of this thesis highlights the data collection procedures and sampling.

CHAPTER FIVE

RESULTS AND DISCUSSIONS

5.1 Introduction

The previous chapter provided the design and methodology of the thesis through the framework of the study, and the two models that were used to examine CG mechanisms and firm performance. The first model examines the relationship between characteristics of the board of directors, characteristics of the audit committee, and structure of ownership on one side and firm performance on the other side. The second model examines the relationship between the composite of board of directors' characteristics, the composite of audit committee characteristics, and the structure of ownership on one side and firm performance on the other side. Moreover, the previous chapter discussed the development of the hypotheses, the measurement of the variables, and the procedures of data collection and sampling.

This chapter provides the empirical evidence of the thesis concerning the relationship between CG mechanisms and firm performance. The discussion in this chapter is divided into six sections. Section 5.2 presents a description and statistics of the sample and data collection process. It is followed by the descriptive statistics and the statistics of the sample selection and instrument used in this research. Section 5.3 discusses the descriptive data. Section 5.4 focuses on panel data and diagnostic tests. Section 5.5 reports the results of equations 5.1 (individual) and equation 5.2 (composite of board characteristics and composite of audit committee characteristics). Sensitivity tests were

carried out to ensure the consistency and robustness of the analysis, which are discussed in section 5.6. Section 5.7 concludes the chapter.

5.2 Sample Description and Sample Statistics

The sample of this study comprised all listed companies on Tadawul from 2007 to 2011, as stated in Chapter 4. In determining the effect of CG mechanisms on firm performance, the study must determine all data that relates to (1) the characteristics of the boards of directors, (2) the characteristics of the audit committee, and (3) the ownership structure. In addition, it needs to determine (4) financial and statistical data for each company in the sample. All of this data is obtained from the financial statements and notes to the accounts, in addition to information needed to calculate Tobin's Q, for example, where the market price of the shares is collected from the Thomson Financial Data Stream Advance. Some information, like the qualifications in accountancy or finance of each member either on the audit committee or board of director, was not always available from the companies' annual reports. In this case, this information was obtained from other sources such as Internet, business magazines, books, newspapers, market announcement, and company announcements. However, this study double-checked the data produced by the financial statements with the data obtained from the Thomson Financial Data Stream Advance and other sources.

The collected data related to CG mechanisms were put on a worksheet with the relevant information, as follows: (1) Board of directors effectiveness, including the number of Royal family members on the board of directors, total number of directors sitting on the board of directors who are not on the audit committee, number of independent non-executive

directors on the board of directors who are not on the audit committee, number of board of directors' meetings, number of qualified members in accountancy or finance on the board who are not on the audit committee, whether the CEO is also the chair of the board of directors, and number of directors who hold more than one directorship in publicly-listed companies and are not on the audit committee; (2) Audit committee effectiveness, including the number of outside members on the audit committee who are expert in accountancy or finance, number of audit committee members having more than one directorship on publicly-listed companies' board or audit committee, total number of members sitting on the audit committee, number of independent non-executive members on the audit committee, number of audit committee meetings, and number of qualified members in accountancy or finance on the audit committee; (3) Ownership structure, including the number of ordinary shares held by Royal family members, number of ordinary shares held by non-Royal family members, number of ordinary shares held by the government and its agencies, and number of ordinary shares held by domestic corporations, and (4) Financial and statistic data, including market price of shares, total capital, total debt, total assets, net income, ROA, ROE, date the company was established, whether there was a change in board members, whether the years are 2008 and 2009 and whether the company received a market penalty.

In order to confirm the outliers, this study used the Cook Distance test¹³ (Hair, Anderson, Tatham & Black, 2006; Hamilton, 2003; Stata Web Books). Forty-nine observations were considered as outliers by using STATA to test Cook's distance values of more than 0.01

¹³ There are other two ways of identifying an outlier or unusual observation: (1) Studentized residual to detect observation in which the dependent variable is unusual for certain values of the independent variables; and (2) Leverage to find out whether an observation of an independent variable has deviated from its mean and which may affect the estimation of the regression coefficients. According this method, observations with leverage of more than $2k/n$ where k is the number of independent variables and n is number of observations determine outliers.

(4/622). In order to avoid distortion in results the 49 outliers were discarded (Hair *et al.*, 2006). The final dataset was 573 observations.

5.3 Descriptive Statistics

This section illustrates descriptive statistics of continuous and dichotomous variables for all samples of the two models, including minimum, maximum, mean, median, and standard deviation. This is an attempt to interpret and discuss the results obtained from descriptive statistics for the independent variables that include board of directors' effectiveness score, audit committee effectiveness score, board of directors effectiveness, and audit committee effectiveness. Moreover, ownership structure and control variables for the two models will be discussed together. Table 5.1 exhibits the dependent variables TOBIN'S Q, ROA, and ROE to interpret and discuss the results from descriptive statistics.

5.3.1 Independent Variables

Table 5.1 outlines general descriptive statistics concerned with independent variables. The mean and median values of the board of directors' effectiveness score (BDE_SCORE) are 48 percent and 43 percent, respectively. The values of BDE_SCORE range from 0 percent to 100 percent. This means that there are companies in Saudi Arabia with boards of directors that do not have the power of impact and at the same time, there are boards of directors that have a high impact. With respect to audit committee effectiveness score (ACE_SCORE), the mean and median values are 30 percent and 33 percent, respectively. The values of ACE_SCORE range from 0 percent to 67 percent. This implies that the effect of ACE_SCORE is average and lower than that of BDE_SCORE.

5.3.1.1 Board of Directors Effectiveness

Table 5.1 shows the statistical description of characteristics of board of directors. For example, in board Royal family members (BD_RFAMILY), there are companies without Royal family members on the board, while in contrast there are companies that have as high as four Royal family members on the board with a mean of 0.26. Interestingly, board size (BD_SIZE) has no company with fewer than two board members who are not on the audit committee and a maximum of 11, with an average of about 6.58 and median of 7.00. In comparison, board size in Saudi Arabia seems to be larger than in Malaysia; for example, mean size of about 5.00 as reported by Abdull Rahaman and Ali (2006), but smaller than companies in the UK and U.S., where boards consist of about nine members in the UK and 11 in the U.S. These findings also confirm that Saudi companies comply with recommendations of the Saudi code of CG that state that each company should have no more than 11 members on the board of directors.

With respect to independent directors (BD_INDE), the highest percentage of independent non-executive directors who are not on the audit committee is 100 percent and the lowest is 0 percent, with mean and median 43 percent. Board of directors' meetings (BD_MEETS) range from 0 to 15 meetings during the year, with mean and median of 5.00 times. The result of this study is close to the result obtained by Al-Ghamdi (2012)'s study that covered years between 2006 and 2009. This study found Saudi Arabia average number of board meetings, of about 4.5 times. Board of directors' meetings in Saudi Arabia appear to be less frequent than board meetings in the U.S., with an average of seven times as reported by Uzun, Szewczyk, and Varma (2004), and more than six in Malaysian companies, as reported by Rahaman and Ali (2006). In relation to another

characteristic, the percentage of qualified members in accountancy or finance who are not on the audit committee (BD_FINKNOW) ranges from 0 percent to 50 percent, with a mean of 6 percent. Even though the Saudi code of CG prohibits CEO duality (CEO_DUAL), that is, combining the position of the chairman of the board of directors with any other executive position in the company, around 14 percent of Saudi companies separate the position of the chairman of the board of directors from the CEO function, as opposed to 84 percent of companies which have duality, as shown in Tables 5.1 and 5.2. With regard to multiple directorships (BD_MDIR), the percentage of directors having more than one directorship in publicly-listed companies who are not on the audit committee ranges from 0 percent to 100 percent, with a mean of 37 percent and median of 33 percent.

5.3.1.2 Audit Committee Effectiveness

Table 5.1 shows the statistical description of audit committee characteristics. For example, the outside members on the audit committee who are expert in accountancy or finance (AC_OUTFINEX) range from 0 percent (no expert in accountancy or finance sitting on the audit committee in Saudi companies) to 100 percent (all audit committees' members are expert) with a mean of 36 percent and median 33 percent. Audit committee multiple directorships (AC_MDIR) range from 0 percent (no member of audit committee having more than one directorship on publicly-listed companies' board or audit committee) to 100 percent (all members have multiple directorships, with mean and median 25 percent). Interestingly, the average number of members sitting on the audit committee (AC_SIZE) is 3.16, which is similar to the average of the study conducted by Al-Ghamdi (2012) on Saudi Arabia from 2006 to 2009, to UK companies, which average 3.58 (Habbash, 2010),

and to Malaysian companies, which average 3.0 (Iskandar & Saleh, 2009). Audit committee independence (AC_INDE) ranges from 0 percent (no independence of audit committee members in Saudi companies) to 100 percent (all audit committees' members are independents) with a mean of 41 percent and median 33 percent. On average, audit committee members (AC_MEETS) hold approximately 4.15 meetings a year; that is the same as the U.S. companies (4.53) documented by Xie *et al.* (2003) and more than Malaysian companies (2.8), as reported by Iskandar and Saleh (2009). In addition, 7.5 percent of Saudi companies have an audit committee possessing at least one financial expert in accounting or finance.

5.3.1.3 Ownership Structure

As indicated in Table 5.1, ownership concentration is an independent variable in both models. The study sample shows that Saudi-listed companies have a mean Royal family ownership (RF_OWN) of 2.40 percent, non-Royal family ownership (NRF_OWN) of 7.40, government ownership (GOV_ OWN) of 9.10 percent, and domestic corporate ownership (DOMESTIC_OWN) of 19.30 percent.

5.3.1.4 Control Variables

The control variables for the two models as shown in Tables 5.1 and 5.2 reveal that the mean of firm size (SIZE) is *SR mil* 6.38 and median *SR mil* 6.24, with a maximum of *SR mil* 8.52 and a minimum of *SR mil* 4.82. Moreover, the average leverage (LEV) of the sample companies is 16.08 percent and median 8.46, with a maximum of 69 percent and a minimum of 0 percent. With regard to the companies' age (FAGE), the oldest company in Saudi Arabia was 57 years old and the newest company was one year old, with average

and median 21 years. In terms of management change (MCHANG), 34 percent of the companies in the sample have had changes in members of the board of directors; the remaining 66 percent did not make any changes. Moreover, the percentage of Saudi companies that faced financial crises (FCRIS) in 2008 and 2009 were 13 percent, with 87 percent of the companies having no such problem with an average of 41 percent, as depicted in Table 5.2. Interestingly, the sample showed that the percentage of companies that received market penalty (MPENAL) was 41 percent, and the rest of the companies (59 percent) did not receive such a market penalty.

5.3.2 Dependent Variables

Dependent variables are measured by using three different proxies—one related to market-based performance measurement that is a ratio of the market (TOBINS_Q), and two that are related to accounting-based performance measurements—Return on Assets (ROA) and Return on Equity (ROE). As depicted in Table 5.1, the average of companies with TOBINS_Q is 1.49 and median is 1.22, with maximum value 6.31 and minimum value 0.002. Moreover, the average value of ROA is 5.35 and median is 4.35, with maximum value 29.80 and minimum value 21.89. Interestingly, the average value of ROE is 9.18 and median 8.49, with maximum value 41.64 and minimum value 41.25.

Table 5.1
Descriptive Statistics of Continuous Variables

Variables	Minimum	Maximum	Mean	Median	Std. Deviation
TOBINS_Q	0.002	6.309	1.496	1.221	0.959
ROA	-21.890	29.800	5.348	4.3500	7.480
ROE	-41.250	41.640	9.178	8.490	13.034
BDE_SCORE (decimal)	0.000	1.000	0.478	0.429	0.175
ACE_SCORE (decimal)	0.000	0.667	0.298	0.334	0.153
BD_RFAMILY (number)	0.000	4.000	0.257	0.000	0.641
BD_SIZE (number)	2.00	11.00	6.58	7.00	1.838
BD_INDE (decimal)	0.000	1.000	0.433	0.429	0.241
BD_MEETS (number)	0.000	15.000	4.990	5.000	2.166
BD_FINKNOW (decimal)	0.000	0.500	0.066	0.000	0.107
CEO_DUAL	0.000	1.000	0.857	1.000	0.350
BD_MDIR (decimal)	0.000	1.000	0.365	0.333	0.276
AC_OUTFINEX (decimal)	0.000	1.000	0.357	0.333	0.291
AC_MDIR (decimal)	0.000	1.000	0.246	0.250	0.274
AC_SIZE (number)	0.000	6.000	3.161	3.000	0.927
AC_INDE (decimal)	0.000	1.000	0.408	0.333	0.336
AC_MEETS (number)	0.000	16.000	4.150	4.000	2.743
AC_FINEX (decimal)	0.000	1.000	0.0752	0.000	0.158
RF_OWN (%)	0.000	95.00	2.40	0.000	0.100
NRF_OWN (%)	0.000	75.40	7.40	0.000	0.133
GOV_OWN (%)	0.000	83.60	9.10	0.000	0.179
DOMIESTIC_OWN (%)	0.000	75.00	19.30	10.00	0.219
FSIZE	4.815	8.522	6.376	6.243	0.847
LEV	0.000	69.170	16.085	8.460	18.159
FAGE (number)	0.553	56.986	21.239	20.497	14.139
MCHANG	0.000	1.000	0.335	0.000	0.472
FCRIS	0.000	1.000	0.410	0.000	0.492
MPENAL	0.000	1.000	0.127	0.000	0.334

Note: Number of observations is 573.

Table 5.2
Descriptive Statistics (percentage) for dummy variables

Dichotomous Variables	1	0	Totals
CEO_DUAL	491 (86%)	82 (14%)	573 100%
MCHANG	192 (34%)	381 (66%)	573 100%
FCRIS	73 (13%)	500 (87%)	573 100%
MPENAL	235 (41%)	338 (59%)	573 100%

5.4 Panel Data and Diagnostic Tests

Due to the nature of this study, which used five consecutive years and 145 cross-sectional companies, the panel data model was used for its advantages over time series or cross-section companies. According to econometric assumptions, there are several panel data models used in different cases, such as: (1) Constant coefficients models or pooled OLS regression, (2) Random Effects models (RE), and (3) Fixed Effects models (FE). The selection of the appropriate model depends on a few tests and assumptions (Baltagi, 2008; Greene, 2003; Gujarati & Porter, 2012).

After choosing the suitable model, it must be tested in order to verify that assumptions of multiple regressions are met to ensure misleading results are avoided. The diagnostics test covers multicollinearity, heteroscedasticity, and autocorrelation.

5.4.1 Panel Data

Panel data enables social sciences researchers to take into consideration both the cross-sectional and time series effect in the study, and assists them in determining the sources of possibly mixed effects. In this case, with repeated observations of enough cross-sections, the panel model allows social sciences researchers to study the dynamics of change with short time series and undertake longitudinal analyses in a wide variety of fields. Needless to say, panel data can enhance the quality and quantity of data and enrich empirical analysis through combining time series with cross-sections that would be not possible using only one of these two dimensions to get the same results. However, panel data can control some omitted variables even without noticing them, but it is enough to

notice changes in the dependent variable over time (Baltagi, 2008; Greene, 2003; Gujarati & Porter, 2012).

Constant coefficients model or pooled OLS regression is considered one type of panel model that can be run when there are neither significant spatial nor significant temporal effects (Stock & Watson, 2007). The second type of panel model is RE, used with random constant term to handle the ignorance or error of outcome variable. In this case RE is a function of a mean value in addition to a random error (Greene, 2003). The third type of model would have constant slopes with intercepts that differ according to the cross-sectional (group) companies. This means there are no significant temporal effects, but the significant differences among companies exist in this model (Davidson & MacKinnon, 1993). In order to determine which model is suitable for use, some tests must be performed.

5.4.1.1 Choosing Between Random Effect and Pooled OLS Regression

Lagrange Multiplier test (LM test) helps to choose between RE model and pooled OLS regression (constant coefficients model). The null hypothesis in the LM test is that variances across companies are zero. There is no significant difference across companies (i.e., no panel effect). In the other words, if they are insignificant (*p-value, prob > χ^2 larger than 0.05*), then pooled OLS regression is suitable to use.

Table 5.3
Lagrange Multiplier Test

Model 1			
	TOBINS_Q	ROA	ROE
Chi ² (1)	43.88	255.08	211.56
Prob > chi ²	(0.000)	(0.000)	(0.000)
Model 2			
Chi ² (1)	78.02	308.24	221.95
Prob > chi ²	(0.000)	(0.000)	(0.000)

As shown in Table 5.3, the results of LM test for both models are significant. Here the null hypotheses are rejected and conclude that RE model is appropriate, because there is evidence of significant differences across companies; therefore, RE regression can be run (Breusch & Pagan, 1980; Gujarati & Porter, 2012).

5.4.1.2 Choosing Between Fixed Effect and Random Effects

The Hausman specification test helps to choose between FE model and RE model. From a statistical point view, RE model is a model with specific case and zero correlation, whiles the FE model is a model with random effects that correlate with the explanatory variables. According to the Hausman test, the null hypothesis is the coefficient estimated by the efficient RE estimator and is the same as the one estimated by the consistent FE estimator.

If they are insignificant (*p-value, prob > chi² larger than .05*), then it is safe to use RE model; otherwise, FE model effect is used (Davidson & MacKinnon, 1993; Greene, 2003; Stock & Watson, 2007).

Table 5.4
Hausman Specification Tests

Model 1			
	TOBINS_Q	ROA	ROE
Chi ² (23)	175.46	104.67	74.01
Prob > chi ²	(0.000)	(0.000)	(0.000)
Model 2			
Chi ² (11)	175.66	96.10	81.19
Prob > chi ²	(0.000)	(0.000)	(0.000)

All results revealed in Table 5.4, for model 1 and model 2 Hausman specification test models are significant (*prob < chi² less than .05*). Here the null hypotheses are rejected and it can be concluded that FE model is appropriate, because there is evidence of significant differences across companies; therefore, FE regression can be run (Gujarati & Porter, 2012).

5.4.1.3 Results of Fixed Effect

Table 5.5 shows the results of testing the hypotheses on model 1 (Tobin's Q, ROA, and ROE) by using Fixed Effect method, utilizing the GRETL software package in order to evaluate firm performance. The table depicts estimated model coefficients, the associated significant test results, and the adjusted R^2 and the F -values for Tobin's Q, ROA, and ROE of model 1.

Table 5.5

Model 1, FIXED-EFFECTS results based on TOBINS_Q, ROA, and ROE

Variables	TOBINS_Q	ROA	ROE
Const	6.391 (0.000)***	8.702 (0.012)**	-9.013 (0.144)
BD_RFAMILY	0.238 (0.000)	1.600 0.001***	0.668 (0.460)
BD_SIZE	0.017 (0.458)	-0.097 (0.625)	0.011 (0.975)
BD_INDE	-0.145 (0.353)	1.880 (0.170)	4.092 (0.093)*
BD_MEETS	-0.007 (0.691)	-0.244 (0.105)	-0.299 (0.265)
BD_FINKNOW	-0.734 (0.029)**	0.370 (0.900)	5.024 (0.281)
CEO_DUAL	0.139 (0.156)	1.0110 (0.238)	1.642 (0.224)
BD_MDIR	0.035 (0.793)	-1.381 (0.230)	-3.290 (0.107)
AC_OUTFINEX	-0.156 (0.305)	-6.167 (0.000)***	-4.097 (0.083)*
AC_MDIR	0.217 (0.135)	0.757 (0.550)	-0.097 (0.966)
AC_SIZE	-0.066 (0.134)	-0.361 (0.347)	-0.520 (0.446)
AC_INDE	-0.230 (0.056)*	-4.382 (0.000)***	-4.033 (0.030)**
AC_MEETS	-0.026 (0.075)*	-0.072 (0.570)	-0.334 (0.140)
AC_FINEX	0.381 (0.118)	2.524 (0.235)	5.704 (0.131)
RF_OWN	0.880 (0.019)**	3.584 (0.271)	12.964 (0.025)**
NRF_OWN	0.953 (0.000)***	14.228 (0.000)***	25.717 (0.000)***
GOV_OWN	1.471 (0.000)***	12.578 (0.000)***	20.385 (0.000)***
DOMESTIC_OWN	0.358 (0.082)*	7.028 (0.000)***	12.088 (0.000)***
FSIZE	-0.770 (0.000)***	-1.189 (0.042)**	1.093 (0.293)
LEV	0.007 (0.000)***	0.030 (0.111)	0.035 (0.294)
FAGE	0.000 (0.950)	0.201 (0.000)***	0.353 (0.000)***
MCHANG	-0.001 (0.983)	-0.351832 (0.573)	-1.335 (0.230)
FCRIS	-0.368 (0.361)	2.952 (0.400)	4.39038 (0.481)
MPENAL	0.153 (0.158)	0.282 (0.765)	0.601 (0.720)
R2	(0.640)	(0.363)	(0.531)
Adjusted R2	(0.492)	(0.382)	(0.338)
F-statistic	(4.318)	(2.954)	(2.748)
P-value	(0.000)	(0.000)	(0.000)

***significant at 1% level (one-tailed), **significant at 5% level (one-tailed), *significant at 10% level (one-tailed).

With regard to the F -values, Tobin's Q, ROA, and ROE are statistically significant at the 1 percent level, indicating that the overall model 1 (Tobin's Q, ROA, and ROE) can be interpreted. The adjusted R_s^2 for the models Tobin's Q, ROA, and ROE are 49.20 percent, 38.20 percent and 33.80 percent, respectively. These statistics show that Tobin's Q has explained 64.00 percent of the total variance in firm performance. As for the model ROA, the statistics show that it explains 36.30 percent of the variance in firm performance. In the same vein, model ROE explains 53.10 percent of the variance in firm performance. Furthermore, the adjusted R_s^2 of the three models illustrate that Tobin's Q has the highest explanatory power, followed by ROE and then ROA.

In the same way, Table 5.6 shows the results of testing the hypotheses on model 2 (Tobin's Q, ROA, and ROE) by using the Fixed Effect method, utilizing the GRETTL software package in order to evaluate firm performance. The F -values, Tobin's Q, ROA, and ROE, are statistically significant at the 1 percent level, indicating that the overall model 2 (Tobin's Q, ROA, and ROE) can be interpreted. The R_s^2 for the models Tobin's Q, ROA, and ROE are 64.00 percent, 48.20 percent, and 51.10 percent, respectively. Furthermore, the adjusted R_s^2 of the three models illustrate that Tobin's Q, at 45.90 percent, has the highest explanatory power, followed by ROE 28.70 percent and ROA 32.70.

Table 5.6

Model 2, FIXED-EFFECTS results based on TOBINS_Q, ROA, and ROE

Variables	TOBINS_Q	ROA	ROE
Const	6.032 (0.000)***	5.959 (0.074)*	-12.620 (0.025)**
BDE_SCORE	0.561 (0.009)***	2.526 (0.185)	4.554 (0.158)
ACE_SCORE	0.470 (0.043)**	6.499 (0.002)***	8.539 (0.016)**
RF_OWN	1.458 (0.000)***	6.029 (0.055)*	12.315 (0.020)**
NRF_OWN	0.877 (0.001)***	14.983 (0.000)***	26.466 (0.000)***
GOV_OWN	1.391 (0.000)***	13.088 (0.000)***	19.304 (0.000)***
DOMESTIC_OWN	0.424 (0.024)**	5.162 (0.002)***	9.557 (0.000)***
FSIZE	-0.825 (0.000)***	-2.070 (0.000)***	0.300 (0.731)
LEV	0.009 (0.000)***	0.051 (0.006)***	0.045 (0.145)
FAGE	0.001 (0.572)	0.208 (0.000)***	0.337 (0.000)***
MCHANG	-0.028 (0.703)	-0.899 (0.167)	-1.581 (0.151)
FCRIS	-0.316 (0.440)	2.719 (0.458)	4.615 (0.457)
MPENAL	-0.200 (0.068)*	-0.422 (0.666)	0.474 (0.774)
R2	(0.606)	(0.482)	(0.510)
Adjusted R2	(0.459)	(0.287)	(0.327)
F-statistic	(4.108)	(2.477)	(2.785)
P-value	(0.000)	(0.000)	(0.000)

***significant at 1% level (one-tailed), **significant at 5% level (one-tailed), *significant at 10% level (one-tailed).

However, the Fixed Effect method needs to conduct diagnostic tests for both models to ensure good fitness of the model to begin the multivariate analysis.

5.4.2 Diagnostic Tests

To successfully conduct a chosen model in the study, regression diagnostics tests were checked for all variables to verify that assumptions of multiple regressions were met and to avoid misleading results. The discussion of diagnostics tests, starting with testing of outliers of the sample, was done in section 5.2 in this chapter. The remaining diagnostics tests—

multicollinearity, heteroscedasticity, and autocorrelation—will be discussed in the next sections.

5.4.2.1 Test of Multicollinearity

Multicollinearity occurs when one or more independent variables are related to one another. High multicollinearity affects explanation and estimation of each independent variable in the regression variant (Hair *et al.*, 2006). Therefore, data must be checked for the possible existence of multicollinearity, using several examinations. These examinations include the correlations matrix test and Variance Inflation Factor (VIF). The correlations matrix test is considered the simplest and most obvious means of detecting multicollinearity, through which all the independent variables are scanned to make sure there is no presence of high correlations. Statistically, a correlation of 0.9 and above indicates a serious problem (Hair *et al.*, 2006).

The correlations matrix of the two models in Tables 5.7 and 5.8 show that there is no multicollinearity, because none of the variables correlates above 0.9 in the two models. All variables have a correlation of less than 0.540 for both models. Therefore, the correlation matrix shows that multicollinearity does not constitute an issue in either of the two models.

Table 5.7 Correlation Matrix of Independent Variables Model 1

	BD_RFAMILY	BD_SIZE	BD_INDE	BD_MEETS	BD_FINKNOW	CEO_DUAL	BD_MDIR	AC_OUTFINEX	AC_MDIR	AC_SIZE	AC_INDE	AC_MEETS	AC_FINEX	RF_OWN	NRF_OWN	GOV_OWN	DOMESTIC_OWN	FSIZE	LEV	FAGE	MCHANG	FCRIS	MPENAL
BD_RFAMILY	1																						
BD_SIZE	0.004	1																					
BD_INDE	0.047	0.075	1																				
BD_MEETS	-0.023	-0.031	-0.049	1																			
BD_FINKNOW	-0.070*	0.003	-0.050	-0.021	1																		
CEO_DUAL	-0.015	0.026	-0.019	0.035	0.076*	1																	
BD_MDIR	0.138***	0.050	0.106**	-0.021	0.060	-0.005	1																
AC_OUTFINEX	-0.177***	0.032***	0.080*	-0.046	0.016	0.104**	0.059	1															
AC_MDIR	0.075*	-0.042	-0.017	0.079*	0.071*	-0.074	0.258***	-0.156***	1														
AC_SIZE	-0.040	-0.195***	0.032	0.144***	0.022	0.006	0.201***	0.230***	0.180***	1													
AC_INDE	0.026	-0.175***	0.160***	0.000	-0.003	0.047	0.114***	-0.262***	0.291***	0.163***	1												
AC_MEETS	-0.055	0.025	-0.018	0.300***	0.091**	-0.014	0.113***	0.171***	0.112***	0.286***	0.017	1											
AC_FINEX	-0.049	0.068	0.091**	0.084**	0.124***	-0.005	0.039	-0.123**	0.163***	0.018	0.030	0.256***	1										
RF_OWN	0.292***	-0.007	-0.025	-0.009	-0.082**	0.064	0.022	-0.035***	0.115***	-0.003	0.023	-0.058	-0.081	1									
NRF_OWN	-0.117***	-0.054	-0.178***	0.043	0.132***	0.085**	-0.025	-0.167***	0.018	0.060	0.062	-0.002	-0.053	-0.058	1								
GOV_OWN	0.010	0.057	0.082**	0.358***	0.083**	0.019	0.052	0.091**	-0.021	0.140***	-0.054	0.273***	0.034	-0.095**	-0.135***	1							
DOMESTIC_OWN	-0.122***	0.183***	-0.271***	-0.116***	-0.061	0.052	0.009	0.167***	0.039	-0.030	-0.054	-0.104**	-0.133***	-0.143***	-0.197***	-0.248***	1						
FSIZE	-0.054	0.244**	-0.046	0.182***	0.034	0.028	0.242***	0.020	0.137***	0.218***	0.153***	0.091**	0.020	-0.017	-0.030	0.540***	0.104**	1					
LEV	-0.028	-0.130	-0.113***	-0.020	-0.084**	-0.093	0.104**	-0.135***	0.093**	0.047	-0.040	-0.048	-0.004	0.088**	0.036	0.063	0.024	0.403***	1				
FAGE	-0.197***	-0.124***	0.114***	-0.133***	0.174***	-0.027	0.060	-0.188***	0.115***	0.066	0.248***	-0.043	-0.047	-0.014	0.174***	0.133***	-0.266***	0.129***	-0.004	1			
MCHANG	-0.094**	0.034	-0.009	0.003	-0.018	0.026	0.007	0.163***	-0.008	0.068	0.073*	0.060	-0.108***	-0.070*	-0.028	-0.049	0.091**	0.030	-0.101	0.002	1		
FCRIS	-0.002	-0.027	0.078	-0.046	-0.034	-0.004	0.011	-0.068	-0.135***	-0.041	-0.027	-0.096**	0.007	0.021	0.009	-0.019	-0.022	-0.036	0.024	-0.010	-0.058	1	
MPENAL	-0.063	0.116***	0.018	-0.027	0.018	0.052	-0.068	0.200***	0.026	0.047	-0.018	0.057	0.022	-0.003	-0.086**	-0.060	0.038	-0.039	-0.030	-0.199***	0.105**	-0.170***	1

Notes: ***significant at 1% level (one-tailed), **significant at 5% level (one-tailed), *significant at 10% level (one-tailed). BD_RFAMILY = Royal family members, BD_SIZE = Board size, BD_MEETS= Board meetings, BD_FINKNOW= Board financial knowledge, CEO_DUAL = CEO duality, BD_MDIR= Board multiple directorship, AC_OUTFINEX = Audit committee outside financial expertise, AC_SIZE = Audit committee size, AC_INDE= audit committee independence, AC_MEETS= Audit committee meetings, AC_FINEX = audit committee financial expertise RF_OWN= Royal Family ownership, NRF_OWN= Family ownership, GOV_OWN= Government ownership, DOMESTIC_OWN= Domestic ownership, FSIZE = Firm size, LEV= Leverage, FAGE= Firm Age, MCHANG= Management Change, FCRIS= Financial crisis, MPENAL= Market penalty.

Table 5.8
Correlation Matrix of Independent Variables Model 2

	ACE_SCORE	ACE_SCORE	RF_OWN	NRF_OWN	GOV_OWN	DOMESTIC_OWN	FSIZE	LEV	FAGE	MCHANG	FCRIS	MPENAL
BDE_SCORE	1											
ACE_SCORE	0.080*	1										
RF_OWN	0.057	-0.021	1									
NRF_OWN	-0.044	-0.124	-0.058	1								
GOV_OWN	0.231***	-0.058	-0.095**	-0.135***	1							
DOMESTIC_OWN	-0.101**	-0.050	-0.143***	-0.197***	-0.248***	1						
FSIZE	0.223***	-0.038	-0.017	-0.030	0.540***	0.104**	1					
LEV	-0.095**	0.067	0.088**	0.036	0.063	0.024	0.403***	1				
FAGE	0.066	-0.115***	-0.014	0.174***	0.133***	-0.266***	0.129***	-0.004	1			
MCHANG	-0.024	-0.133***	-0.070*	-0.028	-0.049	0.091**	0.030	-0.101	0.002	1		
FCRIS	-0.034	0.023	0.021	0.009	-0.019	-0.022	-0.036	0.024	-0.010	-0.058	1	
MPENAL	0.008	0.008	-0.003	-0.086**	-0.060	0.038	-0.039	-0.030	-0.199***	0.105**	-0.170***	1

Notes: ***significant at 1% level (one-tailed), **significant at 5% level (one-tailed), *significant at 10% level (one-tailed). BDE_SCORE = Board of directors' effectiveness score, ACE_SCORE= Audit committee effectiveness score, RF_OWN= Royal Family ownership, NRF_OWN= Family ownership, GOV_OWN= Government ownership, DOMESTIC_OWN= Domestic ownership, FSIZE = Firm size, LEV= Leverage, FAGE= Firm Age, MCHANG= Management Change, FCRIS= Financial crisis, MPENAL= Market penalty.

Tolerance and VIF express the degree to which each independent variable is explained by the set of other independent variables. Table 5.9 shows the VIF values for the two models. For model 1, VIF values range from 1.08 to 2.97, with mean 1.47, and for model 2, VIF values range from 1.04 to 2.14, with mean 1.31. In general, the accepted degrees of multicollinearity equal a VIF of 10 (Hair *et al.*, 2006; Pallant, 2001). Thus, the VIF for the two models was found to be around 1.04 to 2.97, which is below 10. Therefore, multicollinearity is not a problem in this study for the five year periods.

Table 5.9
Tolerance (1/VIF) and Variance Inflation Factor (VIF) Tests for model 1 & model 2

Model 1			Model 2		
Independent Variable	VIF	1/VIF	Independent Variable	VIF	1/VIF
BD_RFAMILY	1.30	0.771	BDE_SCORE	1.15	0.870
BD_SIZE	1.70	0.590	ACE_SCORE	1.07	0.932
BD_INDE	1.32	0.760	RF_OWN	1.09	0.918
BD_MEETS	1.29	0.776	NRF_OWN	1.16	0.863
BD_FINKNOW	1.15	0.869	GOV_OWN	1.89	0.529
CEO_DUAL	1.08	0.926	DOMESTIC_OWN	1.43	0.699
BD_MDIR	1.24	0.803	FSIZE	2.14	0.469
AC_OUTFINEX	1.76	0.570	LEV	1.36	0.735
AC_MDIR	1.33	0.750	FAGE	1.18	0.851
AC_SIZE	1.50	0.665	MCHANG	1.07	0.938
AC_INDE	1.46	0.685	FCRIS	1.04	0.965
AC_MEETS	1.42	0.706	MPENAL	1.09	0.914
AC_FINEX	1.25	0.800	Mean VIF	1.31	
RF_OWN	1.25	0.799			
NRF_OWN	1.37	0.730			
GOV_OWN	2.37	0.423			
DOMESTIC_OWN	1.69	0.593			
FSIZE	2.97	0.337			
LEV	1.55	0.644			
FAGE	1.41	0.707			
MCHANG	1.10	0.912			
FCRIS	1.08	0.929			
MPENAL	1.14	0.877			
Mean VIF	1.47				

5.4.2.2 Test of Heteroscedasticity

One of the common violations in regression analysis with cross-section data is the presence of an unequal variance of the residual, which is known as heteroscedasticity (Hair *et al.*, 2006). Since heteroscedasticity is a problem that can cause a bias value for true variance, the OLS estimators will be inefficient and no longer the best linear unbiased estimator. It may result in higher t and F value, where the null hypotheses may be rejected when they should not be rejected if the problem is addressed.

Several tests can be used in order to detect the heteroscedasticity problem such as Park Test, Glejser Test, Sperman's Rank Correlation Test, Goldfeld-Quandt Test, Breusch-Pagan-Godfrey Test, and White's General Heteroscedasticity Test. This study has used *Breusch-Pagan-Godfery/Cook-Weisberg* Test to test whether the squared standardized residual are linearly related to the dependent variables (Gujarati & Porter, 2012).

Using this test, the null hypothesis that the variance of the residuals is homogeneous is tested. Therefore, a p -value of higher than 0.05 means failure to reject the hypothesis and that the residual is deemed homogeneous.

Table 5.10
Breusch-Pagan/Cook-Weisberg Test

Chi² (p-value)	TOBINS_Q	ROA	ROE
Model 1	98.09 (0.00)	4.14 (0.00)	13.07 (0.00)
Model 2	94.80 (0.00)	3.63 (0.00)	8.12 (0.00)

Table 5.10 shows the results of the *Breusch-Pagan/Cook-Weisberg* Test that was used by this study to detect heteroscedasticity in the models. The results show that the p -value is less than 0.05 for all companies. Thus, the models reject the null hypothesis and indicate

that there is a problem of heteroscedasticity in this study. This result shows that the variance is not constant and needs to be corrected.

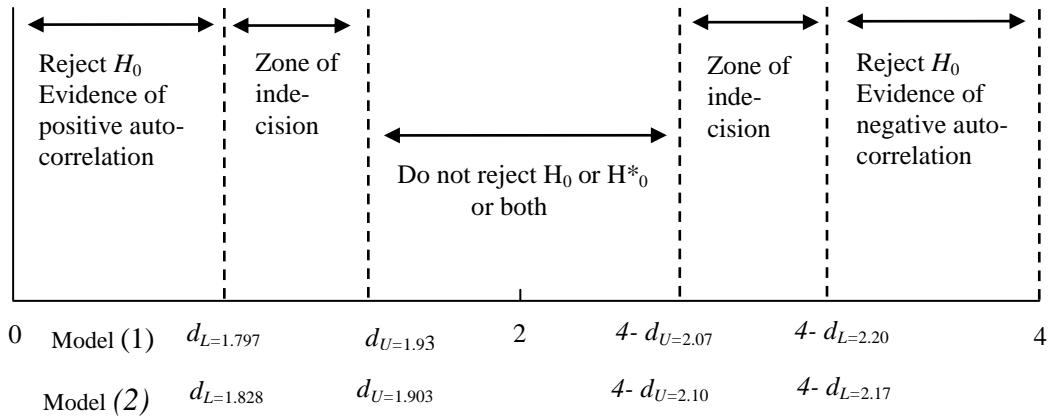
5.4.2.3 Test of Autocorrelation

Autocorrelation indicates the violation of the regression's assumption that the error terms are not correlated with one another, either on the direction or the size among a series of observations in time series or cross-sectional data. Autocorrelation can take on two types: negative or positive. In negative autocorrelation, consecutive errors usually have the same sign: positive residuals are probably followed by negative residuals and vice versa. Positive residuals are probably followed by positive residuals, while negative residuals are probably followed by negative residuals.

The main reasons for autocorrelation are inertia, omitted variables from the model, and data manipulations. At various turning points in a time series, inertia is very common. This happens as a result of successive observations, and the error terms associated with them depend on each other. Another cause of autocorrelation is omitted variables from the model. When an important independent variable is omitted from a model, its effect on the dependent variable becomes part of the error term. Regarding data manipulations, a time series is created by aggregating the data and introducing a certain amount of smoothing by creating a yearly data set by summing or averaging over months. Thus, some of the randomness of disaggregated data is lost. This smoothing can lead to systematic patterns in the error terms, thus leading to the possibility of autocorrelation.

There are various methods to detect autocorrelation; the most often used test is Durbin-Watson test. Figure 5.1 shows that Durbin-Watson value should be approximately 2.0

when there is no autocorrelation, either positive or negative serial correlation (Gujarati & Porter, 2012).



Figur 5.1
Durbin-Watson Value

Table 5.11
Durbin-Watson Test TOBINS_Q, ROA, and ROE

DW values	TOBINS_Q	ROA	ROE
Model 1	2.013	2.038	1.947
Model 2	1.966	2.091	1.979

In both models, Durbin-Watson test d-statistic values are not rejected H_0 (no positive autocorrelation) or H^*_0 (no negative autocorrelation), or both. Durbin-Watson values in model 1 are 1.947 in ROE, 2.013 in TOBINS_Q, and 2.038 in ROA. In model 2, Durbin-Watson values are 1.966 in TOBINS_Q, 1.979 in ROE, and 2.091 in ROA. Therefore, the residuals are reasonably independent of each other and there is no occurrence of serious autocorrelation problems.

However, heteroscedasticity does not destroy the unbiasedness and consistency properties of the OLS estimators, but they are no longer efficient and not even asymptotical. This lack of efficiency makes the usual hypothesis-testing procedure of dubious value. Therefore, remedial measures may call for White's Heteroscedasticity Consistent Variance

and Standard Error technique, Weighted Least Square approach (WLS), or by transforming the data (Gujarati & Porter, 2012; Hair *et al.*, 2006). The test is conducted using GRETTL software. The WLS estimators reduce standard error in some cases and an increase it in others. The variation results in the t-statistics rising or lessening, respectively, with no change in the coefficient. The results do not differ significantly from previous regression results. There are only small changes in the t-statistic and *p*-values to reflect the correction done by the estimator.

5.5 Multivariate Results

5.5.1 Multivariate Results for Model 1

The WLS method was utilized as a multivariate analysis using the GRETTL software package to test the hypotheses on model 1, Tobin's Q, ROA, and ROE, in order to evaluate firm performance. Table 5.12 depicts the estimated model coefficients, the associated significant test results, and the adjusted R^2 and the *F*-values for Tobin's Q, ROA, and ROE of model 1. Model 1's hypotheses tested include: board of directors effectiveness (H_1 to H_7), audit committee effectiveness (H_9 to H_{14}), and ownership structure (H_{16} to H_{19}). As portrayed by Table 5.3, *F*-values for Tobin's Q, ROA, and ROE are statistically significant at the 1 percent level, indicating that the overall model 1 (Tobin's Q, ROA, and ROE) can be interpreted. The adjusted R^2 for the models Tobin's Q, ROA, and ROE are 59.70 percent, 53.60 percent and 61.50 percent, respectively. These statistics show that Tobin's Q has explained 61.30 percent of the total variance in firm performance. As for the model ROA, the statistics show that it explains 55.50 percent of the variance in firm performance. In the same vein, model ROE explains

63.00 percent of the variance in firm performance. Furthermore, the adjusted R^2 of the three models illustrate that ROA has the highest explanatory power, followed by Tobin's Q and then ROE. Overall, the three models show a good model fit.

Table 5.12

Model 1, WLS results based on TOBINS_Q, ROA, and ROE

Variables	TOBINS_Q	ROA	ROE
Const	5.8120 (0.000)***	6.085 (0.000)***	-11.362 (0.000)***
BD_RFAMILY	0.186 (0.000)***	1.777 (0.000)***	2.003 (0.000)***
BD_SIZE	0.033 (0.027)**	-0.004 (0.973)	0.078 (0.707)
BD_INDE	0.061 (0.528)	1.025 (0.208)	1.875 (0.172)
BD_MEETS	0.007 (0.539)	-0.249 (0.008)***	-0.453 (0.003)***
BD_FINKNOW	-1.027 (0.000)***	-2.062 (0.164)	-0.982 (0.718)
CEO_DUAL	0.125 (0.038)**	0.839 (0.094)*	1.353 (0.112)
BD_MDIR	-0.061 (0.442)	-3.199 (0.000)***	-4.497 (0.000)***
AC_OUTFINEX	-0.289 (0.002)***	-4.686 (0.000)***	-2.723 (0.038)**
AC_MDIR	0.086 (0.313)	0.831 (0.244)	-0.853 (0.503)
AC_SIZE	-0.059 (0.046)**	0.066 (0.784)	-0.463 (0.247)
AC_INDE	-0.139 (0.053)*	-3.581 (0.000)***	-1.429 (0.171)
AC_MEETS	-0.051 (0.000)***	-0.082 (0.263)	-0.335 (0.006)***
AC_FINEX	0.311 (0.027)**	1.129 (0.320)	1.693 (0.237)
RF_OWN	0.534 (0.046)**	0.710 (0.709)	6.167 (0.142)
NRF_OWN	0.613 (0.000)***	12.253 (0.000)***	26.371 (0.000)***
GOV_OWN	1.811 (0.000)***	7.005 (0.000)***	12.762 (0.000)***
DOMESTIC_OWN	0.392 (0.000)***	4.481 (0.000)***	9.211 (0.000)***
FSIZE	-0.710 (0.000)***	-0.553 (0.116)	2.300 (0.000)***
LEV	0.007 (0.000)***	0.021 (0.082)*	0.020 (0.336)
FAGE	0.001 (0.573)	0.207 (0.000)***	0.338 (0.000)***
MCHANG	-0.003 (0.940)	-0.454 (0.220)	-1.271 (0.041)**
FCRIS	-0.268 (0.000)***	-0.668 (0.068)*	-1.627 (0.000)***
MPENAL	-0.214 (0.000)***	0.068 (0.908)	0.680 (0.537)
R ²	(0.613)	(0.555)	(0.630)
Adjusted R ²	(0.597)	(0.536)	(0.615)
F-statistic	(37.863)	(29.747)	(40.713)
P-value	(0.000)	(0.000)	(0.000)

***significant at 1% level (one-tailed), **significant at 5% level (one-tailed), *significant at 10% level (one-tailed).

Surrounding model 1, Tobin's Q, ROA, and ROE, 13 test variables out of 19 variables are significantly related to firm performance (Tobin's Q). As for model ROA, nine test variables out of 17 are found to have an association with ROA. With regard to ROE, eight test variables out of 17 have a significant association with ROE. This suggests that the significant variables within the three models of firm performance have a comparable degree of importance, to some extent, in explaining the variation in the dependent variables. Specifically, they make the strongest unique contribution in predicting firm performance in the context of Saudi Arabia. Therefore, the null hypothesis (no effect) is rejected and the alternative hypothesis that there is a significant effect of corporate board of directors effectiveness, audit committee effectiveness, and ownership structure on firm performance is accepted.

5.5.1.1 Board of Directors Effectiveness

Consistent with the prediction, *BD_RFAMILY* was positively associated with Tobin's Q (p -value = 0.001, one-tailed significance), ROA (p -value = 0.001, one-tailed significance), and ROE (p -value = 0.001, one-tailed significance). This result showed that Royal family members on the board of directors (as decision makers and owners) closely oversee management and affect decision making to improve firm performance. This view is consistent with agency theory, as recognized by Jensen and Meckling (1976) and Fama and Jensen (1983), suggesting that the higher the number of Royal family members on the boards of SLC, the greater the firm performance. Therefore, hypothesis H_1 is supported.

BD_SIZE was considered another effective element in board characteristics that may have an influence on firm performance. The result shows that board size was significantly and positively associated with firm performance with only Tobin's Q (p -value = 0.027, one-tailed significance). However, board size were not significant when ROA and ROE were used as proxies of firm performance (p -value = 0.973, one-tailed significance and p -value = 0.707, one-tailed significance respectively). This result was supported by the resource dependence theory, which hypothesises that larger boards were more diversity in term of members' backgrounds, expertise and skills, which can generate a greater abundance of ideas that can provide high levels of performance (Brown *et al.*, 2011). This result is also supported by prior studies such as Alexander *et al.* (1993); Dalton *et al.* (1999); Goodstein *et al.* (1994); and Pfeifer (1972, 1973), who found a positive link between board size and firm performance. Therefore, hypothesis H_2 is accepted.

Regarding *BD_INDE*, the result of this study shows that there is no significant relationship with Tobin's Q (p -value = 0.528, one-tailed significance), ROA (p -value = 0.208, one-tailed significance), and ROE (p -value = 0.172, one-tailed significance). This result is inconsistent with agency theory that expects board independence would enhance the boards' ability to monitor management and therefore improve firm performance. Although, with the existence of conflict with agency theory, the study's result was compatible with previous studies such as Abdullah (2004), who found insignificant links with firm performance. Other studies found negative value with ROA; for example, Amran (2010); Finegold *et al.* (2007); Lang *et al.* (2004); and Rashid *et al.* (2010). A possible justification for these results is that a significant number of non-executive

directors could mean strategic activities are hindered (Goodstein *et al.*, 1994), along with the presence of excessive monitoring (Baysinger & Butler, 1985), a lack of actual independence (Demb & Neubauer, 1992), a lack of experience (Agrawal & Knoeber, 1996), and too many older and less productive individuals (Juran *et al.*, 1975; Koontz, 1967). It is held by some that non-executive independent directors are under the power of the owner-manager, meaning there is the keen presence of political pressure. Furthermore, the cultural and societal nature, along with the appointment of board of directors members being impacted through discrimination and prejudice, was recognized as playing a notable role when choosing members. Such behaviour was recognized as having the potential to impact the independence of the board, which could result in lack of the real independence (Al-Ghamdi, 2012; Chahine & Tohme, 2009). Therefore, hypothesis H_3 is rejected.

The current study assumes that *BD_MEETS* was positively associated with firm performance. Inconsistent with this study's assumption, the results show that there are significant and negative associations with ROA (p -value = 0.008, one-tailed significance) and ROE (p -value = 0.003, one-tailed significance), but there is no significant relationship with Tobin's Q (p -value = 0.539, one-tailed significance). These results are inconsistent with agency theory which expects that frequency of board meetings would enhance the board's ability to show greater capabilities in terms of advising, disciplining, and monitoring management, and thus improving performance (Vafeas, 1999; Jensen, 1993; Lipton & Lorsch, 1992).

However, with the existence of conflict with agency theory, the study's result is compatible with previous studies; for instance, Adams *et al.* (2010) claim that directors

who mainly control management recognize that they are less involved in the discussions of the boardroom when compared with other directors. Moreover, Karamanou and Vafeas (2005) justify that negative results might not vary only in terms of firm-level characteristics, but also in terms of country-specific CG and legal and institutional practices. Another justification is that the limited time directors spend together is not normally used for meaningful exchange of ideas among themselves. In actuality, more mundane activities, such as various formalities and the presentation of reports, take up a large portion of meeting time, which decreases the time available for efficiently monitoring management (Lipton & Lorsch, 1992) and which can therefore have a negative impact effect on firm performance. Therefore, hypothesis H_4 is rejected.

BD_FINKNOW was found to be negatively and significantly associated with Tobin's Q (p -value = 0.001, one-tailed significance), and negatively but not significantly associated with ROA (p -value = 0.164, one-tailed significance) and ROE (p -value = 0.718, one-tailed significance). This indicates that when there are more members with a financial background sitting on the board, the lower the firm performance. The reason that this finding contradicts what was hypothesized may be due to the fact that members with financial knowledge are busy and do not have time to perform their board of directors duties properly. Although, with the existence of conflict with agency theory, this study supports previous work (Srivastava & Lee, 2008) that found that members with financial knowledge have a weak relationship with firm performance. Therefore, hypothesis H_5 is rejected.

CEO_DUAL was found to be positively and significantly associated with Tobin's Q (p -value = 0.038, one-tailed significance) and ROA (p -value = 0.094, one-tailed

significance) but positively and insignificantly associated with ROE (p -value = 0.112, one-tailed significance). However, these results are consistent with this study's assumption that companies enhance their performance upon the amalgamation of the CEO and board chairperson positions. Saudi companies may prefer to have CEO duality due to the nature of the ownership structure in KSA. Most companies in Saudi Arabia are highly concentrated and managed by family, government, and domestic companies. Thus, by having CEO duality, power and control are in the hands of CEO/Chairman, who can focus on creating and generating the company's fortune. This finding is inconsistent with the suggestion made by the Saudi Code of CG (2006) that mandates the separation of the role of chairman of the board of directors and any executive position in a company, as it enhances their CG structure. However, this study found that CEO duality enhances greater firm performance than a separation of the two roles. Therefore, this study supports previous works done by Haniffa and Cooke (2002), which suggest that firm management is more effective when there is a presence of duality leadership, due to decreased information asymmetry and less bureaucracy. Chen *et al.* (2008a) stated that businesses might choose to amend their leadership structure in an attempt to enhance firm performance. According to Chahine and Tohme (2009), CEO duality scores lower in terms of public offering under-pricing, the rationale for such centered on the cultural issues linked with family involvement and political ties. Therefore, hypothesis H_6 is accepted.

Interestingly, as reported in Table 5.12, BD_MDIR is negatively and significantly associated with ROA (p -value = 0.001, one-tailed significance) and ROE (p -value = 0.001, one-tailed significance), but insignificantly and negatively associated with

Tobin's Q (p-value = 0.442, one-tailed significance). These results are inconsistent with this study's assumption that companies enhance their performance with multiple directorships (directors of a board sitting on more than one board), and is also inconsistent with resource dependence theory. These results are also inconsistent with the Saudi Code of CG (2006) that states that each member of the board of directors shall not act as a member of the board of directors of more than five joint stock companies at the same time. A plausible interpretation for the insignificance and contradictions of the relationship between *BD_MDIR* and firm performance may be attributed to the nature of the Saudi environment that depends on a strong relationship (friendship or blood relationship) between members, which leads to impairment when appointing competent members to the board of directors (Al-Ghamdi, 2012).

However, these findings are consistent with the previous works by Fich and Shivdasani (2006); Jackling and Johl (2009); Kiel and Nicholson (2003); and Mace (1986), who found companies with busy directors were equivocal to a weak quality of governance mechanism, owing to the fact that their demanding schedules hinder their capacity to become efficient directors within the firm. Therefore, hypothesis H_7 is rejected.

Overall, from the above results, it is found that the board of directors has a significant effect on firm performance. In other words, from the seven board characteristics (Royal family members, board size, board independence, board meetings, board financial knowledge, CEO duality, and board multiple directorships), only Royal family members, board size, and CEO duality have a significant and positive relationship in terms of firm performance. The other three characteristics (board meetings, board financial knowledge, and board multiple directorships) have a significant and negative

relationship with firm performance. Only one board of directors characteristic, board independence, has no significant relationship with firm performance. In Saudi Arabia, the formation of a board of directors has been the primary focus of companies and plays a vital role in improving performance or preventing potential wrongdoings.

5.5.1.2 Audit Committee Effectiveness

The current study assumes that *AC_OUTFINEX* is positively associated with firm performance, but the obtained results are inconsistent with the assumption of the study. The results show that there is significant and negative association with Tobin's Q (p -value = 0.002, one-tailed significance), ROA (p -value = 0.001, one-tailed significance), and ROE (p -value = 0.038, one-tailed significance). These findings are inconsistent with agency theory, where lack of financial experts may be not able to complement the expertise of the audit committee through the provision of monitoring and controlling (Fama & Jensen, 1983; Jensen & Meckling, 1976). Moreover, these findings do not support the recommendations of the Saudi CG Code (2006) that audit committees should comprise at least one member with relevant financial experience for provision of monitoring and controlling firm performance. The plausible interpretations for the negative relationship between outside financial expertise in accountancy or finance with firm performance are that the financial experts do not work full time on the audit committee, because most of the financial experts work for universities or accounting firms. Moreover, the financial expert must obey firm management in order keep his job or be re-elected as a member of audit committee. This would affect lack of awareness of responsibilities and independence toward firm performance. Therefore, hypothesis H_9 is rejected.

In terms of *AC_MDIR*, the results of this study show that there is no significant relationship with firm performance with Tobin's Q (p -value = 0.313, one-tailed significance), ROA (p -value = 0.244, one-tailed significance), and ROE (p -value = 0.503, one-tailed significance). These results are inconsistent with the agency theory, because from the agency perspective, audit committee multiple directorships are needed for carrying out monitoring responsibilities delegated by the board in order to add value to the firm. A possible explanation may be that those who hold different directorships on audit committees have additional responsibilities, and therefore may not be able to adequately monitor management (Core, Holthausen & Larcker, 1999; Vafeas, 2003), thus incurring additional agency costs. Therefore, hypothesis H_{10} is rejected.

AC_SIZE, was found to be negatively and significantly associated with Tobin's Q (p -value = 0.064, one-tailed significance), and positively but not significantly associated with ROA (p -value = 0.784, one-tailed significance), and negatively but not significantly associated with ROE, (p -value = 0.247, one-tailed significance). These indicate that large audit committee size does not necessarily enhance firm performance. This finding contradicts what was hypothesized perhaps because not making effective decisions leads to frequency of audit committee meetings (Vafeas, 1999). These findings are similar to those of Chan and Li (2008), which showed a negative relationship between firm value (Tobin's Q) and audit committee size. Therefore, hypothesis H_{11} is rejected.

Unexpectedly, as reported in Table 5.12, *AC_INDE* is negatively and significantly associated with Tobin's Q (p -value = 0.053, one-tailed significance) and ROA (p -value = 0.001, one-tailed significance), but insignificantly and negatively associated with ROE (p -value = 0.171, one-tailed significance). The negative trend indicates that audit

committees with greater independence do not actually reinforce firm performance. The audit committee members were not really independent enough to play a serious monitoring role and contribute significantly to firm performance. Independents on the audit committee fulfill the requirement of the Saudi Code of CG (2006), but might not be able to exercise their powers. Independent audit committee members could create choking strategic actions (Goodstein *et al.*, 1994), as they are obligated to the board of directors and, therefore, not free of political pressure. Over time, the independence of the audit committee members who serve for too long become less powerful monitors (Bhagat & Black, 2002). A lack of knowledge about the company, its business, and its work environment by audit committee members—because of lack enough time to do their duties properly—would support the view that audit committee members do not bring the requisite skills to the job and prefer to play a less monitoring role that will decrease the firm value (Agrawal & Knoeker, 1996; Hermalin & Weisbach, 1991). Therefore, hypothesis H_{12} is rejected.

With respect to *AC_MEETS*, the results show a negative and significant association between audit committee meetings and firm performance. This appears clearly with Tobin's Q (p -value = 0.001, one-tailed significance) and ROE (p -value = 0.006, one-tailed significance), while the results show a negative and insignificant association with ROA (p -value = 0.263, one-tailed significance). The negative direction indicates that audit committee members who do not show diligence and inclination towards investing efforts and time in its duties and responsibilities will decrease firm value (Lee *et al.*, 2004). However, previous literature documents that there is a casual relationship between audit committee attributes and effectiveness, such as the effect of audit

committee meetings on earnings management (Abdul Rahman & Mohamed Ali, 2006; Xie *et al.*, 2003), fraudulent financial reporting (Abbott & Parker, 2000; Beasley *et al.*, 2000), and financial reporting problems and misstatements (Abbott & Parker, 2000; Yatim *et al.*, 2006). These findings are not surprising because the effectiveness of the audit committee depends, to a large extent, upon their diligence or activities, such as the frequency, duration, and content of audit committee meetings (Abbott *et al.*, 2004; Beasley & Salterio, 2001; Collier & Gregory, 1998; Ng & Tan, 2003; Teoh & Lim, 1996). In fact, audit committee effectiveness depends mainly on how successfully its members can carry out their roles and responsibilities no matter their composition. Therefore, hypothesis H_{13} is rejected.

In terms of AC_FINEX , when insider financial expertise of the audit committee member is tested against firm performance, the results show a positive and significant relationship with Tobin's Q (p -value = 0.027, one-tailed significance), but a positive and insignificant relationship with ROA (p -value = 0.320, one-tailed significance), and with ROE (p -value = 0.237, one-tailed significance). These results show that insider financial expertise of the audit committee is able to help the board to make decisions and, thus, reinforce firm performance. The AC_FINEX fulfills the requirement of the Saudi Code of CG (2006). In this case, the audit committee needs to have at least one member possessing a good level of financial and accounting knowledge. Numerous studies, such as those of Chan and Li (2008); Rainsbury *et al.* (2009) note a positive relationship between insider expert audit committee and overall value of the company. Therefore, hypothesis H_{14} is accepted.

Overall, after testing the above six audit committee characteristics, the results show that four audit committee characteristics (outside financial expertise, size, independence, and meetings) have a significant negative effect on firm performance, one audit committee characteristic (multiple directorships) has no significant effect on firm performance, and one audit committee characteristic (financial expertise) has a significant positive effect on firm performance. Therefore, in general, the current study findings show that there is a negative relationship between audit committee characteristics and firm performance in KSA. This findings might be due to the low experience of audit committee members. Additionally, there are no regulations in Saudi companies that determine and illustrate the vital role of audit committee members these reasons are supported by Abdul Rahman and Al-Janadi (2006) .Thus, the role of the audit committee in Saudi companies does not support firm performance.

5.5.1.3 Ownership Structure

The current study assumes that RF_OWN is positively associated with firm performance, and the obtained result is consistent with the assumption of the study. The results show that there is a significant and positive association with Tobin's Q (p -value = 0.046, one-tailed significance), and a positive but insignificant association with ROA (p -value = 0.709, one-tailed significance) and ROE (p -value = 0.142, one-tailed significance). This finding is consistent with agency theory, which assumes that Royal families maximize their wealth and shareholders' wealth (Fama & Jensen, 1983; Jensen & Meckling, 1976). Thus, Royal families in KSA impact the behaviors of management and others in order to achieve end objectives (Al-Ghamdi, 2012; Clark, 2004). Therefore, hypothesis H_{16} is accepted.

With regard to *NRF_OWN*, the results show a positive and significant association with firm performance, and these results are consistent with the assumption of the study. The results show that there is a significant and positive association with Tobin's Q (p -value = 0.001, one-tailed significance), ROA (p -value = 0.001, one-tailed significance), and ROE (p -value = 0.001, one-tailed significance). These findings are in line with agency theory, which suggests that concentrated ownership can result in a reduction in agency problems (Fama & Jensen 1983; Tosi & Gmex-Mejia, 1989). The results emphasize that the impacts of Saudi family ownership are more likely to be recognized when there is a combination of family ownership with active family control and management. These results are consistent with previous studies, such as Chu (2011); Mishra *et al.* (2001) and Wiwattanakantang (2001), which highlight a positive link between founding family control and firm value. Therefore, hypothesis H_{17} is accepted.

As expected, *GOV_ OWN* shows a positive and significant association with firm performance, results that are consistent with this study's assumption. The government ownership results have a positive and significant relationship with Tobin's Q (p -value = 0.001, one-tailed significance), ROA (p -value = 0.001, one-tailed significance), and ROE (p -value = 0.001, one-tailed significance). These findings were expected, because government ownership in some of organizations is recognized as a key CG element enhancing firm performance owing to the fact that government ownership is more influential than other ownership in opportunistic behaviour mitigation (Demsetz, 1983; Shleifer & Vishny, 1986). These results are consistent with previous studies such as Ang and Ding (2006); Aussenegg and Jelic (2003); Mak and Li (2001); Sun *et al.* (2002), which have shown a notable positive link between firm performance and government ownership. Moreover, these results are

consistent with the local study conducted on the United Arab Emirates—which is known to be a comparable setting to KSA—by Aljifri and Moustafa (2007), that shows there is a positive link between firm performance and government ownership. Therefore, hypothesis H_{18} is accepted.

In terms of *DOMESTIC_OWN*, the results of the relationship between domestic corporate ownership with firm performance is positive and significant. These results are in line with the assumption of the study that shows a significant and positive association with Tobin's Q (p -value = 0.001, one-tailed significance), ROA (p -value = 0.001, one-tailed significance), and ROE (p -value = 0.001, one-tailed significance). These findings are consistent with agency theory, which suggests that the growth of owner as largest shareholder in companies leads to decreased agency costs (Jensen & Meckling, 1976). Domestic corporate ownership in KSA delivers a number of important advantages to firms involved in specific business agreements by decreasing the costs of monitoring the ventures or alliances between firms and their corporate blockholders (Allen & Phillips, 2000; Claessens *et al.*, 2000). Moreover, these results are consistent with previous studies such as Chhibber and Majumdar (1999); Djankov and Hoekman (2000); and Khanna and Palepu (2000), which suggest that greater degrees of resources—financial, organizational, and technical—are delivered by domestic investors. Therefore, hypothesis H_{19} is accepted.

Overall, the effect of ownership structure, Royal family ownership, non-Royal family ownership, government ownership, and domestic corporate ownership are found to be significantly and positively associated with firm performance in KSA. These results are consistent with previous studies.

5.5.1.4 Control Variables

In terms of control variables, *FSIZE* is positively and significantly related to ROE (p -value = 0.001, one-tailed significance), but negatively and significantly related to Tobin's Q (p -value = 0.001, one-tailed significance). The results show mixed findings. On one side, with ROE, larger firms have greater opportunity to train and develop staff, diversify risk (Kumar, 2004; Helmich, 1977), and have more analysts available who are centered on the performance of the firm and, as such, are under greater pressure to perform well (Pfeffer & Salancik, 1978), thus increasing the company's performance. However, with Tobin's Q, large firms lead to decreased firm performance. When a company needs to expand, the board of directors may be reluctant to raise external funds because they are wary of losing control and their positions, resulting in a decrease in the company's performance.

LEV was found to be positively and significantly related to Tobin's Q (p -value = 0.001, one-tailed significance) and ROA (p -value = 0.082, one-tailed significance). This is because management faces pressure in terms of enhancing firm performance as it decreases the moral risk through lessening free cash flow at the disposal of management (Alzharani, *et al.*, 2011; Jensen, 1986; Harris & Raviv, 1991; Myers, 1990). In this case, management will be more aware of consuming fewer perks, and ultimately become more effective in circumventing bankruptcy, and thus the loss of reputation and control. Moreover, the risks apparent as a result of failure to pay off debts acts as an efficient motivational force that means firms are more effective (Bhandari & Weiss, 1996; Nickell *et al.*, 1997). Therefore, firm's performance increases with leverage.

FAGE was found to be positively and significantly related with ROA (p -value = 0.001, one-tailed significance) and ROE (p -value = 0.001, one-tailed significance). These findings

indicate that with the increase in firm age, management garners much more insight into their abilities and skills over time, which ultimately increases firm value (Stinchcombe, 1965; Evans, 1987b). Therefore, the firm's performance increases with firm age.

With regard to *MCHANG*, the result is significantly and negatively associated with ROE (p -value = 0.041, one-tailed significance). This means that changes in board of directors' structure lead to decreased firm performance (Hart, 1995; Patton & Baker, 1987; Warner, Watts & Wruck, 1988). The changes in board of directors affect not only the firm's value in the market, but also the firm's performance (Fama, 1980; Furtado & Karan, 1990). Therefore, firm performance decreases with changes in board of directors.

With respect to *FCRIS*, the results are strongly negatively associated with Tobin's Q (p -value = 0.001, one-tailed significance), ROA (p -value = 0.068, one-tailed significance), and ROE (p -value = 0.001, one-tailed significance). This means that the financial crisis witnessed in 2008 and 2009 negatively impacted firm performance (Aldamen *et al.*, 2012; Al-Hamidy, 2010; Gonenc & Aybar, 2006; Lemmon & Lins, 2003; Mitton, 2002; Rajan & Zingales, 1998). Saudi Arabia, like other countries, experienced the crisis that negatively and fundamentally impacted firm performance and resulted in notable vulnerability with regard to non-adherence to regulations, as well as a lack of accountability, disclosure, and transparency (Saudi Accountancy Journal, 2008). Therefore, financial crises negatively affect firm performance.

Remarkably, companies subjected to *MPENAL* experience a decrease in firm performance, according to results obtained with Tobin's Q (p -value = 0.001, one-tailed significance). In this regard, companies that violate any market regulations experience firm value losses (Klein &

Leffler, 1981). In line with this view, prior studies suggest that reputational costs include lack of safety (Mitchell & Maloney, 1989), deceptive bidding practices (Smith, 1992), punitive damages lawsuits (Karpoff & Lott, 1999), defense procurement fraud (Karpoff *et al.*, 1999), and financial misrepresentation (Karpoff *et al.* 2004; Peltzman, 1981). Therefore, market penalty negatively affects firm performance.

Overall, the effects of control variables on firm performance are mixed; for example, firm size has both negative and positive results, while leverage and firm age have positive results. In contrast, management change, financial crisis, and market penalty have negative results. However, these results are consistent with previous studies.

5.5.2 Multivariate Results for Model 2

In model 2, Tobin's Q, ROA, and ROE utilized the WLS method for multivariate analysis using the GRETTL software package to test the hypotheses, in order to evaluate firm performance. Table 5.13 depicts the estimated model coefficients, the associated significant test results, and the adjusted R^2 and F -values for Tobin's Q, ROA, and ROE of model 2. Model 2's hypotheses tested include: board of directors' effectiveness score H_8 , audit committee effectiveness score H_{15} , and ownership structure (H_{16} to H_{19}). As portrayed in Table 5.13, the F -values for Tobin's Q, ROA, and ROE are statistically significant at the 1 percent level, indicating that the overall model 2 (Tobin's Q, ROA, and ROE) can be interpreted. The adjusted R^2 for the model's Tobin's Q, ROA, and ROE are 48.70 percent, 43.90 percent and 49.60 percent, respectively. These statistics show that Tobin's Q explains 48.70 percent of the total variance in firm performance. As for model ROA, the statistics show that it explains 43.90 percent of the variance in firm

performance. In the same vein, model ROE explains 49.60 percent of the variance in firm performance. Furthermore, the adjusted R_s^2 of the three models illustrate that ROE has the highest explanatory power, followed by Tobin's Q and ROA. Overall, the three models show a good model fit.

Table 5.13
Model (2), WLS results based on TOBINS_Q, ROA, and ROE

Variables	TOBINS_Q	ROA	ROE
Const	5.238 (0.000)***	6.094 (0.000)***	-15.560 (0.000)***
BDE_SCORE	0.280 (0.031)**	-1.534 (0.153)	1.255 (0.490)
ACE_SCORE	0.585 (0.000)***	4.841 (0.000)***	3.832 (0.066)*
RF_OWN	0.997 (0.000)***	3.200 (0.078)*	8.010 (0.035)**
NRF_OWN	0.501 (0.000)***	13.802 (0.000)***	25.145 (0.000)***
GOV_OWN	1.284 (0.000)***	7.198 (0.000)***	9.667 (0.000)***
DOMESTIC_OWN	0.388 (0.001)***	3.719 (0.000)***	7.636 (0.000)***
FSIZE	-0.697 (0.000)***	-1.346 (0.000)***	1.786 (0.001)***
LEV	0.007 (0.000)***	0.030 (0.005)***	0.022 (0.296)
FAGE	0.002 (0.169)	0.214 (0.000)***	0.364 (0.000)***
MCHANG	-0.022 (0.624)	-1.208 (0.001)***	-1.871 (0.000)***
FCRIS	-0.211 (0.000)***	-0.495 (0.176)	-0.650 (0.295)
MPENAL	-0.237 (0.000)***	-0.401 (0.495)	0.780 (0.506)
R2	(0.499)	(0.450)	(0.506)
Adjusted R2	(0.487)	(0.439)	(0.496)
F-statistic	(46.431)	(38.307)	(47.852)
P-value	(0.000)	(0.000)	(0.000)

***significant at 1% level (one-tailed), **significant at 5% level (one-tailed), *significant at 10% level (one-tailed).

Regarding model 2's Tobin's Q, ROA, and ROE, six test variables out of six variables are significantly related to firm performance (Tobin's Q). As for ROA and ROE, five test variables out of six were found to have an association with firm performance. This

suggests that the significant variables within model 2 of firm performance have a comparable degree of importance, to some extent, in explaining the variation in the dependent variables. Specifically, they make the strongest unique contribution in predicting firm performance in the context of KSA. Therefore, the null hypothesis (no effect) is rejected and the alternative hypothesis—that corporate board of directors’ effectiveness score, audit committee effectiveness score, and ownership structure have a significant effect on firm performance—is accepted.

5.5.2.1 Board of Director’s Effectiveness Score

As depicted in Table 5.13, *BDE_SCORE* results are significantly and positively associated with Tobin’s Q (p -value = 0.031, one-tailed significance), but not significantly associated with ROA (p -value = 0.153, one-tailed significance) and ROE (p -value = 0.490, one-tailed significance). These results are consistent with the assumption of the study that the effectiveness of the board of directors contributes to higher firm performance. The higher the degree of the board of directors’ monitoring effectiveness, the more involved the board becomes and the more effective they are in increasing firm performance. The board’s monitoring effectiveness comprises the existence of Royal family members, suitable board size, independence of directors, frequent meetings, adequate financial knowledge, absence of CEO duality, and the presence of multiple directorships.

This result also explains that the board of directors is a group whose decision making affects firm performance. The result also suggests that combining agency, stewardship, and resources dependence theories can provide more and sufficient interpretations about firm performance in KSA, where civilization priorities are dominated by business environment

and decision making. Thus, this result suggests that there is a relationship between board of directors' effectiveness score and firm performance. Therefore, hypothesis H_8 is accepted.

5.5.2.2 Audit Committee Effectiveness Score

ACE_SCORE results are significantly and positively associated with Tobin's Q (p -value = 0.001, one-tailed significance), ROA (p -value = 0.001, one-tailed significance), and ROE (p -value = 0.066, one-tailed significance), as shown in Table 5.13. These results are consistent with the assumption of the study that the effectiveness of the audit committee contributes to higher firm performance. The higher the degree of the audit committee's monitoring effectiveness, the more involved and effective the audit committee becomes in increasing firm performance. The audit committee's monitoring effectiveness comprises the existence of outside financial expertise, suitable audit committee size, independence of audit committee members, adequate financial knowledge, multiple directorships, and frequent meetings.

These results are consistent with Ward *et al.* (2009) who emphasized the importance of analyzing corporate mechanisms as a group rather than individually. Moreover, the results of this study are also consistent with other research results that delivered unclear conclusions, owing to the fact that the analysis was carried out on an individual basis, with the way in which each could possibly contribute to overcoming agency problems an issue tackled in isolation; otherwise stated, the fact that individual mechanisms depend on their counterparts was an aspect that was overlooked (Agrawal & Knoeber, 1996; Nunnally & Bernstein, 1994; O'Sullivan *et al.*, 2008).

However, the results of this study support examining audit committee mechanisms as a group rather than individually. Possible justification is that the individual characteristics of the audit committee complement or are alternates to one another and have more impact on the company's performance in KSA. Thus, this result suggests that there is a relationship between audit committee effectiveness score and firm performance. Therefore, hypothesis H_{15} is accepted.

5.5.2.3 Ownership Structure

The results of *RF_OWN* in model 2 are consistent with the results in model 1 that found a positive association with firm performance. The obtained results of both models are consistent with the assumption of the study. The results in model 2 show a significant and positive association with Tobin's Q (p -value = 0.001, one-tailed significance), ROA (p -value = 0.078, one-tailed significance), and ROE (p -value = 0.035, one-tailed significance). These findings are consistent with agency theory which assumes that Royal families maximize their wealth and shareholders' wealth (Fama & Jensen, 1983; Jensen & Meckling, 1976). Thus, the Royal family in KSA impacts the behaviors of management and others in order to achieve end objectives (Al-Ghamdi, 2012; Clark, 2004). Therefore, hypothesis H_{16} is accepted.

With regard to *NRF_OWN*, the results show a positive and significant association with firm performance in both models, and these results are consistent with the assumption of the study. The results show that there is a significant and positive association with Tobin's Q (p -value = 0.001, one-tailed significance), ROA (p -value = 0.001, one-tailed significance), and ROE (p -value = 0.001, one-tailed significance). These findings are consistent with model 1

and in line with agency theory, which suggests that concentrated ownership can result in a reduction in agency problems (Fama & Jensen 1983; Tosi & Gmex-Mejia, 1989). The results emphasize that the impacts of Saudi family ownership are more likely to be recognized when there is a combination of family ownership and active family control and management. These results are consistent with previous studies, such as Chu (2011); Mishra *et al.* (2001); and Wiwattanakantang (2001), which highlight a positive link between founding family control and firm value. Therefore, hypothesis H_{17} is accepted.

The results of *GOV_ OWN* in model 2 are consistent with the results of model 1, which shows a positive and significant association with Tobin's Q (p -value = 0.001, one-tailed significance), ROA (p -value = 0.001, one-tailed significance), and ROE (p -value = 0.001, one-tailed significance). These results were expected, because government ownership in some organizations is recognized as an important factor in enhancing firm performance (Demsetz, 1983; Shleifer & Vishny, 1986). Moreover, the results are consistent with this study's assumption and previous studies (international and domestic) that showed a notable positive link between firm performance and government ownership (Aljifri & Moustafa, 2007; Ang & Ding, 2006; Aussenegg & Jelic, 2003; Mak & Li, 2001; Sun *et al.*, 2002). Therefore, hypothesis H_{18} is accepted.

The results of *DOMESTIC_ OWN* in models 1 and 2 are the same, showing a positive and significant relationship between domestic corporate ownership and firm performance with Tobin's Q (p -value = 0.001, one-tailed significance), ROA (p -value = 0.001, one-tailed significance), and ROE (p -value = 0.001, one-tailed significance). Both models' results are consistent with agency theory (Jensen & Meckling, 1976) and previous studies (Chhibber & Majumdar, 1999; Djankov & Hoekman, 2000; Khanna & Palepu, 2000). The existence of

domestic corporate ownership decreases the cost of monitoring the ventures or alliances between firms and their corporate blockholders. Moreover, the degrees of resources—financial, organizational, and technical—are delivered by domestic investors (Khanna & Palepu, 2000). Therefore, hypothesis H_{19} is accepted.

Notably, ownership structure in both models 1 and 2 have the same results with Tobin's Q, ROA, and ROE. These results are also supported by agency theory and previous local and international studies. Therefore, the effect of ownership structure in KSA (Royal family ownership, non-Royal family ownership, government ownership, and domestic corporate ownership) on firm performance is positive and significant.

5.5.2.4 Control Variables

The results of *FSIZE* in model 2 are negatively and significantly associated with Tobin's Q (p -value = 0.001, one-tailed significance) and ROA (p -value = 0.001, one-tailed significance), but positively and significantly associated with ROA (p -value = 0.001, one-tailed significance). The results obtained in model 2 are the same as results obtained in model 1, except ROA was not significant in model 1, where it is in model 2. These mixed findings in models 1 and 2 support the two views. The first view relates to larger firms, which increase firm performance through having the ability to improve staff skills and diversify risk (Kumar, 2004; Helmich, 1977) and having more analysts available who are centered on the performance of the firm and, as such, are under greater pressure to perform well, as shown by ROE in both models (Pfeffer & Salancik, 1978). The second view relates to smaller firms, which increase firm performance as shown by Tobin's Q in both models, and ROA in only model 2. This view is based on the opposition of boards of directors of larger firms to raise

external funds because they are wary of losing control and their positions. Therefore, firm performance increases with smaller firms.

With regard to *LEV*, the results obtained in model 2 are the same as results obtained in model 1; a positive and significant association between *LEV* and Tobin's Q and ROA. In model 2, Tobin's Q was found to be (p -value = 0.001, one-tailed significance) and ROA (p -value = 0.005, one-tailed significance). These results are consistent with numerous studies such as Alzharani *et al.* (2011); Jensen (1986); Harris and Raviv (1991); Myers (1990), which argued that highly-leveraged companies perform higher than less leveraged companies. A possible justification of these results is the decrease in moral risk through lessening free cash flow at the disposal of management. Therefore, management will be more aware of consuming fewer perks, and ultimately become more effective in circumventing bankruptcy, and thus avoiding the loss of reputation and control. Moreover, the risks apparent as a result of failure to pay off debts acts as an efficient motivational force that means firms are more effective (Bhandari & Weiss, 1996; Nickell *et al.*, 1997). Therefore, firm performance increases with leverage.

In terms of *FAGE*, the results in model 2 are positively and significantly related with ROA (p -value = 0.001, one-tailed significance) and ROE (p -value = 0.001, one-tailed significance). These results are the same as the results in model 1 and consistent with previous studies such as Evans (1987b) and Stinchcombe (1965), which indicated that an increase in the age of the company accompanies an increase in management skills and abilities to enhance firm performance. Therefore, firm performance increases with firm age.

With respect to *MCHANG*, the results in model 2 are significantly and negatively associated with ROA (p -value = 0.001, one-tailed significance) and ROE (p -value = 0.001, one-tailed

significance), and are consistent with only ROE model 1 and not ROA. These results are consistent with previous studies' results that any changes in board of directors' structure leads to decreased firm performance (Hart, 1995; Patton & Baker, 1987; Warner, Watts & Wruck, 1988). However, any changes in the board of directors affect not only the firm's value in the market, but also the firm's performance (Fama, 1980; Furtado & Karan, 1990). Therefore, the firm's performance decreases with changes in the board of directors.

Unexpectedly, *FCRIS*'s result in model 2 is significantly and negatively associated only with Tobin's Q (p -value = 0.001, one-tailed significance), in contrast with model 1, in which the *FCRIS* result was significantly and negatively associated with Tobin's Q, ROA, and ROE. However, consistency in the format of the results in both models 1 and 2 still exists in that the financial crisis witnessed in 2008 and 2009 negatively impacted firm performance (Aldamen *et al.*, 2012; Al-Hamidy, 2010; Gonenc & Aybar, 2006; Lemmon & Lins, 2003; Mitton, 2002; Rajan & Zingales, 1998). Therefore, financial crises negatively affect firm performance.

Interestingly, in model 2, *MPENAL* is significantly and negatively associated with Tobin's Q (p -value = 0.001, one-tailed significance) which is consistent with the result in model 1. Thus, both models explain that any company that violates market regulations experiences firm value losses (Klein & Leffler, 1981). These results are consistent with previous studies that concentrated on actions which violate the company's reputation and then decrease its performance, such as lack of safety, deceptive bidding, punitive damages, lawsuit practices, procurement fraud, and financial misrepresentations (Karpoff *et al.* 1999; Karpoff *et al.* 2004; Karpoff & Lott, 1999; Mitchell & Maloney,

1989; Peltzman, 1981; Smith, 1992). Therefore, market penalty negatively affects firm performance.

Overall, in both models 1 and 2, the affects of control variables on firm performance are mixed. Firm size has both negative and positive results in both models, while leverage and firm age have positive results in both models. In contrast, management change, financial crisis, and market penalty have negative results in both models. However, these results are consistent with previous studies.

5.6 Sensitivity Tests

This thesis also conducted sensitivity tests to examine whether the main results in both models were robust. Testing both models including or excluded outliers and including or excluding the audit committee members (to or from) the board of directors conducted to find the impact of the outliers and including and excluding the audit committee members (to or from) the board of directors can be beneficial or problematic, when they are included in model 1 and model 2 (Hair *et al.*, 2006).

5.6.1 Testing Both Models Before Excluding Outliers

Multiple regressions are run again before outliers are eliminated to see if there is difference in estimated coefficients. If there is no difference in estimated coefficients before and after deleting the outliers, no outlier is eliminated. As stated by Hair *et al.* (2006), outliers should be retained to ensure generalization of the entire population unless there is evidence that they do not represent the population.

Comparing Table 5.14 (before outliers) with Table 5.12 (after outliers) shows the results of testing the hypotheses, the estimated model coefficients, the associated significant test results, the adjusted R^2 and the F -values for Tobin's Q, ROA, and ROE of model 1 by using the GRETLM software package. F -values for Tobin's Q, ROA, and ROE are statistically significant at the 1 percent level, indicating that the overall model 1 (Tobin's Q, ROA, and ROE) when testing before and after outliers can be interpreted. The adjusted R^2 for the models' Tobin's Q, ROA, and ROE are 54.80 percent, 45.20 percent, and 54.40 percent, respectively (before outliers). In contrast, the adjusted R^2 for the models' Tobin's Q, ROA, and ROE are 59.70 percent, 53.60 percent, and 61.15 percent, respectively (after outliers). These statistics show that Tobin's Q before outliers has explained 56.40 percent, and after outliers, 61.30 percent of the total variance in firm performance. As for model ROA, the statistics show that before outliers it explains 47.30 percent, and after outliers, 55.50 percent of the variance in firm performance. In the same vein, model ROE before outliers explains 56.10 percent, and after outliers, 63.00 percent of the variance in firm performance.

Table 5.14

Model 1, WLS results based on TOBINS_Q, ROA, and ROE (Before Outlier)

Variables	TOBINS_Q	ROA	ROE
Const	7.002 (0.000)***	3.555 (0.138)	-16.525 (0.000)
BD_RFAMILY	0.143 (0.001)***	1.033 (0.003)***	0.758 (0.131)***
BD_SIZE	0.009 (0.630)	-0.205 (0.175)	-0.261 (0.255)
BD_INDE	0.074 (0.547)	0.197 (0.837)	1.663 (0.261)
BD_MEETS	0.004 (0.765)	-0.202 (0.060)*	-0.453 (0.002)***
BD_FINKNOW	-1.489 (0.000)***	0.279 (0.888)	5.593 (0.050)**
CEO_DUAL	0.084 (0.242)	0.232 (0.688)	-0.235 (0.782)
BD_MDIR	0.006 (0.956)	-1.919 (0.028)**	-2.277 (0.149)
AC_OUTFINEX	-0.229 (0.048)**	-4.308 (0.000)***	-3.427 (0.030)**
AC_MDIR	0.024 (0.828)	-0.242 (0.778)	-2.994 (0.050)
AC_SIZE	-0.087 (0.018)**	-0.269 (0.347)	-0.788 (0.088)*
AC_INDE	-0.003 (0.970)	-3.849 (0.000)***	-3.922 (0.001)***
AC_MEETS	-0.060 (0.000)***	-0.148 (0.032)**	-0.371 (0.001)***
AC_FINEX	0.249 (0.138)	4.206 (0.008)***	3.999 (0.113)
RF_OWN	0.961 (0.005)***	1.171 (0.711)	2.903 (0.579)
NRF_OWN	1.396 (0.000)***	13.246 (0.000)***	25.046 (0.000)***
GOV_OWN	2.171 (0.000)***	6.568 (0.000)***	9.887 (0.002)***
DOMESTIC_OWN	0.574 (0.000)***	5.767 (0.000)***	9.300 (0.000)***
FSIZE	-0.789 (0.000)***	0.336 (0.460)	4.256 (0.000)***
LEV	0.002 (0.339)	-0.019 (0.174)	-0.067 (0.005)***
FAGE	-0.007 (0.001)***	0.219 (0.000)***	0.371 (0.000)***
MCHANG	-0.113 (0.054)*	-1.229 (0.009)***	-2.404 (0.002)***
FCRIS	-0.353 (0.000)***	-0.834 (0.226)	-1.579 (0.167)
MPENAL	-0.454 (0.000)***	-0.793 (0.069)*	-1.335 (0.053)*
R ²	(0.564)	(0.473)	(0.561)
Adjusted R ²	(0.548)	(0.452)	(0.544)
F-statistic	(33.736)	(23.309)	(33.171)
P-value	(0.000)	(0.000)	(0.000)

***significant at 1% level (one-tailed), **significant at 5% level (one-tailed), *significant at 10% level (one-tailed).

With regard to model 2, comparing Table 5.13 with Table 5.15 shows the results of testing the hypotheses before and after outliers. *F*-values for Tobin's Q, ROA, and ROE are statistically significant at the 1 percent level, indicating that the overall model 2 (Tobin's Q, ROA, and ROE) when testing before and after outliers can be interpreted. The adjusted R_s^2 for the models' Tobin's Q, ROA, and ROE are 46.00 percent, 40.10 percent, and 43.30 percent, respectively (before outliers). In contrast, the adjusted R_s^2 for the models' Tobin's Q, ROA, and ROE are 48.70 percent, 43.90 percent, and 49.60 percent, respectively (after outliers). These statistics show that Tobin's Q has explained, before outliers, 47.10 percent and after outliers, 49.90 percent of the total variance in firm performance. As for model ROA, the statistics show that it explains, before outliers, 41.20 percent and after outliers, 45.00 percent of the variance in firm performance. In the same vein, model ROE before outliers explains 44.40 percent and after outliers, 50.60 percent of the variance in firm performance.

Table 5.15

Model 2, WLS results based on TOBINS_Q, ROA, and ROE (Before Outlier)

Variables	TOBINS_Q	ROA	ROE
Const	6.277 (0.000)***	2.318 (0.276)	-20.080 (0.000)***
BDE_SCORE	0.093 (0.574)	-2.072 (0.098)*	-1.244 (0.560)
ACE_SCORE	0.641 (0.000)***	6.296 (0.000)***	6.950 (0.006)***
RF_OWN	1.444 (0.000)***	0.215 (0.936)	3.448 (0.486)
NRF_OWN	1.130 (0.000)***	14.831 (0.000)***	25.806 (0.000)***
GOV_OWN	1.810 (0.000)***	7.258 (0.000)***	9.060 (0.003)***
DOMESTIC_OWN	1.587 (0.000)***	4.449 (0.000)***	6.256 (0.001)***
FSIZE	-0.804 (0.000)***	-0.751 (0.044)**	2.770 (0.000)***
LEV	-0.003 (0.146)	0.006 (0.643)	-0.044 (0.070)
FAGE	-0.002 (0.380)	0.222 (0.000)***	0.375 (0.000)***
MCHANG	-0.103 (0.075)*	-1.537 (0.000)***	-2.600 (0.001)***
FCRIS	-0.406 (0.000)***	-0.946 (0.131)	-0.522 (0.663)
MPENAL	-0.363 (0.000)***	-0.634 (0.124)	-0.955 (0.187)
R2	(0.471)	(0.412)	(0.444)
Adjusted R2	(0.460)	(0.401)	(0.433)
F-statistic	(45.181)	(35.575)	(40.615)
P-value	(0.000)	(0.000)	(0.000)

***significant at 1% level (one-tailed), **significant at 5% level (one-tailed), *significant at 10% level (one-tailed).

Overall, Tobin's Q, ROA, and ROE in model 1 and model 2 show good model fit for testing both before and after outliers. Note that the results are more robust with the exclusion of the outliers.

5.6.2 Testing Both Models Including the Audit Committee Members to the Board of Directors

Previous studies have measured the effect of board of directors on firm performance by including or excluding the members of audit committee (to or from) the board of directors (Chen & Zhou, 2007; Conyon & Peck, 1998 and Lee et al., 2004). In order to

make sure whether the main results in both models were robust, sensitivity tests have been conducted. Multiple regressions are run again after including the member of audit committee to board of directors to see if there is difference in estimated coefficients.

Comparing Table 5.16 (including audit committee members to the board of directors) with Table 5.12 (excluding audit committee members from the board of directors) shows the results of testing the hypotheses, the estimated model coefficients, the associated significant test results, the adjusted R^2 and the F -values for Tobin's Q, ROA, and ROE of model 1 by using the GRETL software package. F -values for Tobin's Q, ROA, and ROE are statistically significant at the 1 percent level, indicating that the overall model 1 (Tobin's Q, ROA, and ROE) when testing with including or excluding audit committee members (to / from) the board of directors can be interpreted. The adjusted R^2 for the models' Tobin's Q, ROA, and ROE are 60.70 percent, 55.60 percent, and 61.50 percent, respectively (including audit committee members to the board of directors). In contrast, the adjusted R^2 for the models' Tobin's Q, ROA, and ROE are 59.70 percent, 53.60 percent, and 61.15 percent, respectively (excluding audit committee members from the board of directors). These statistics show that Tobin's Q including audit committee members to the board of directors has explained 62.30 percent, and excluding audit committee members from the board of directors, 61.30 percent of the total variance in firm performance. As for model ROA, the statistics show that including audit committee members to the board of directors it explains 57.50 percent, and excluding audit committee members from the board of directors, 55.50 percent of the variance in firm performance. In the same vein, model ROE including or excluding audit committee members (to/from) the board of directors explains 63.30 percent of the variance in firm performance.

Table 5.16

Model 1, WLS results based on TOBINS_Q, ROA, and ROE without excluding the audit committee members from the board of directors

Variables	TOBINS_Q	ROA	ROE
Const	5.709 (0.000)***	5.007 (0.000)***	-12.639 (0.000)***
BD_RFAMILY	0.179 (0.000)***	1.587 (0.000)***	1.808 (0.000)***
BD_SIZE	0.023 (0.122)	0.045 (0.732)	-0.092 (0.650)
BD_INDE	0.184 (0.124)	3.402 (0.000)	4.469 (0.003)
BD_MEETS	0.007 (0.539)	-0.253 (0.009)***	-0.441 (0.004)***
BD_FINKNOW	-1.327 (0.000)***	-1.641 (0.421)	-0.982 (0.718)
CEO_DUAL	0.115 (0.053)*	0.670 (0.147)	1.327 (0.118)
BD_MDIR	-0.041 (0.992)	-3.199 (0.000)***	-4.870 (0.002)***
AC_OUTFINEX	-0.187 (0.031)**	-3.600 (0.000)***	-2.590 (0.039)**
AC_MDIR	0.093 (0.307)	1.108 (0.142)	-0.853 (0.503)
AC_SIZE	-0.092 (0.000)***	0.061 (0.787)	-0.581 (0.119)
AC_INDE	-0.203 (0.013)**	-4.689 (0.000)***	-2.270 (0.019)**
AC_MEETS	-0.048 (0.000)***	-0.111 (0.116)	-0.316 (0.010)**
AC_FINEX	0.360 (0.011)**	1.513 (0.189)	2.123 (0.154)
RF_OWN	0.552 (0.038)**	1.961 (0.288)	7.551 (0.072)*
NRF_OWN	0.614 (0.000)***	13.776 (0.000)***	27.953 (0.000)***
GOV_OWN	1.763 (0.000)***	7.005 (0.000)***	12.807 (0.000)***
DOMESTIC_OWN	0.433 (0.000)***	5.538 (0.000)***	10.024 (0.000)***
FSIZE	-0.685 (0.000)***	-0.568 (0.104)	2.540 (0.000)***
LEV	0.006 (0.000)***	0.023 (0.051)*	0.015 (0.475)
FAGE	0.001 (0.562)	0.210 (0.000)***	0.345 (0.000)***
MCHANG	-0.002 (0.954)	-0.334 (0.357)	-1.383 (0.029)**
FCRIS	-0.277 (0.000)***	-0.847 (0.021)**	-1.567 (0.000)***
MPENAL	-0.218 (0.000)***	0.004 (0.994)	0.905 (0.401)
R ²	(0.623)	(0.575)	(0.630)
Adjusted R ²	(0.607)	(0.556)	(0.615)
F-statistic	(39.423)	(29.747)	(40.711)
P-value	(0.000)	(0.000)	(0.000)

***significant at 1% level (one-tailed), **significant at 5% level (one-tailed), *significant at 10% level (one-tailed).

With regard to model 2, comparing Table 5.17 with Table 5.13 shows the results of testing the hypotheses including and excluding audit committee members to or from the board of directors. *F*-values for Tobin's Q, ROA, and ROE are statistically significant at the 1 percent level, indicating that the overall model 2 (Tobin's Q, ROA, and ROE) when testing including or excluding audit committee members from the board of directors can be interpreted. The adjusted R_s^2 for the models' Tobin's Q, ROA, and ROE are 43.70 percent, 43.90 percent, and 49.10 percent, respectively (including audit committee members to the board of directors). In contrast, the adjusted R_s^2 for the models' Tobin's Q, ROA, and ROE are 48.70 percent, 43.90 percent, and 49.60 percent, respectively (excluding audit committee members to the board of directors). These statistics show that Tobin's Q has explained, including audit committee members from the board of directors, 44.90 percent and excluding audit committee members from the board of directors, 49.90 percent of the total variance in firm performance. As for model ROA, the statistics show that it explains, including or excluding audit committee members (to or from) the board of directors, 45.00 percent of the variance in firm performance. In the same vein, model ROE including audit committee members to the board of directors explains 50.20 percent and excluding audit committee members from the board of directors, 50.60 percent of the variance in firm performance.

Table 5.17

Model (2), WLS results based on TOBINS_Q, ROA, and ROE without excluding the audit committee members from the board of directors

Variables	TOBINS_Q	ROA	ROE
Const	5.561 (0.000)***	5.781 (0.000)***	-15.235 (0.000)***
BDE_SCORE	0.244 (0.059)*	-1.318 (0.214)	-3.905 (0.035)**
ACE_SCORE	0.591 (0.000)***	4.723 (0.000)***	4.547 (0.029)*
RF_OWN	3.225 (0.077)*	3.200 (0.078)*	9.189 (0.035)**
NRF_OWN	13.732 (0.000)***	13.802 (0.000)***	25.449 (0.000)***
GOV_OWN	7.080 (0.000)***	7.198 (0.000)***	9.289 (0.000)***
DOMESTIC_OWN	3.640 (0.001)***	3.719 (0.000)***	7.440 (0.000)***
FSIZE	-1.305 (0.000)***	-1.346 (0.000)***	2.110 (0.000)***
LEV	0.031 (0.000)***	0.030 (0.005)***	0.012 (0.559)
FAGE	0.215 (0.165)	0.214 (0.000)***	0.364 (0.000)***
MCHANG	-1.223 (0.600)	-1.208 (0.001)***	-2.075 (0.001)***
FCRIS	-0.470 (0.201)	-0.495 (0.176)	-0.603 (0.333)
MPENAL	-0.410 (0.484)	-0.401 (0.495)	0.955 (0.384)
R2	(0.449)	(0.450)	(0.502)
Adjusted R2	(0.437)	(0.439)	(0.491)
F-statistic	(47.000)	(38.307)	(47.106)
P-value	(0.000)	(0.000)	(0.000)

***significant at 1% level (one-tailed), **significant at 5% level (one-tailed), *significant at 10% level (one-tailed).

Overall, Tobin's Q, ROA, and ROE in model 1 and model 2 show good model fit for testing both including excluding audit committee, (to or from), the board of directors members. Note that the results are more robust with model 2 after the excluding of audit committee members from the board of directors.

5.7 Summary and Conclusion

This chapter presented the results of the effect of CG mechanisms on firm performance through testing model 1 and model 2, which were developed in Chapter 4. After the introduction, the chapter began with a description of the sample, the sample statistics, and the data collection. The next section introduced the results of panel data by choosing between RE and OLS models (LM Test) and between FE and RE models (Hausman Specification Test), and checking outliers (Cook Distance Test), multicollinearity (VIF Tests), heteroscedasticity (Breusch-Pagan-Godfery/Cook-Weisberg Test) and autocorrelation (Durbin-Watson Test).

Moreover, this chapter presented the results of multivariate analysis in model 1 that examined the effect of board of directors, audit committee, and ownership structure on firm performance. The results show a significant effect of board of directors, audit committee, and ownership structure on firm performance. Model 2 examined the effect of composite of board of directors, composite of the audit committee, and ownership structure on firm performance in KSA. The test results of model 2 showed a significant effect of composite characteristics of the board of directors, composite characteristics of the audit committee, and ownership structure on firm performance in KSA.

The findings showed that the higher the number of Royal family members on the board of directors, the more the positive effect on firm performance. The larger board size in companies is accompanied by higher firm performance. A higher number of independent directors on boards are found to be insignificant with regard to firm performance. Board

meetings were found to have a negative effect on firm performance. In addition, board members with financial backgrounds were found to be negatively related to firm value, while CEO duality has a positive effect on firm performance. Multiple directorships have a negative effect on firm value.

In terms of the audit committee, financial experts on the audit committee have a negative effect on firm value. Multiple directorships of audit committee members have no significant effect on firm performance. A large audit committee does not necessarily enhance firm performance. Audit committees with greater independence have a negative effect on firm value, and audit committee meetings have a negative effect on firm performance; however, financial expertise of the audit committee members has a positive effect on firm performance.

With regard to the result of ownership structure, Royal family ownership, non-Royal family ownership, government ownership, and domestic corporate ownership are found to be significantly and positively associated with firm performance in both models. Moreover, board of directors' effectiveness score and audit committee's effectiveness score are found to positively effect firm performance. Compound certain board characteristics and audit committee characteristics are associated with enhancing firm performance. In addition, the results of testing Tobin's Q, ROA, and ROE in model 1 and model 2 are more robust after excluding outliers and more robust after excluding audit committee from the board of directors members with the composite model (Model 2).

CHAPTER SIX

SUMMARY AND CONCLUSION

6.1 Introduction

The main purpose of this thesis is to investigate the relationship between CG mechanisms and firm performance in Saudi Arabia. To accomplish this objective, a country background of Saudi Arabia has been presented to provide an understanding of the essential underlying issues. A sample of 573 companies in Tadawul for five years (2007 to 2011) for qualitative and quantitative data has been used. Further, previous studies and theories (agency, stewardship, and resource dependence theory) have been reviewed to provide a scientific base for improving firm performance and offer a conceptual framework showing the relationship between CG mechanisms and firm performance. Nineteen hypotheses have been developed based on these theoretical arguments. Finally, a discussion has been presented of the methods and the main results of the hypothesis testings that are related to CG mechanisms and firm performance for a country characterized by special regulations, a different legal system, and a distinguished environment.

The purpose of this chapter is to summarize the main findings, contributions, and limitations, as well as provide some suggestions to regulatory bodies and recommendations for future research. It consists of five sections. Section 6.2 summarizes the findings from the two main models. Section 6.3 outlines potential

limitations. Section 6.4 introduces the implications and suggests future research. Section 6.5 concludes the thesis.

6.2 Summary of Results

The investigation of the association between CG mechanisms and firm performance in Saudi Arabia is the first of this study's objectives. Accordingly, the following parts summarize the results of testing the two models of this study. Model 1 examines the effect of board of directors effectiveness, audit committee effectiveness, and ownership structure on firm performance in an individual manner. Model 2 investigates the effect of the board of directors, audit committee, and ownership structure on firm performance.

6.2.1 The Results of Model 1

Model 1 includes the hypotheses: board of directors effectiveness (H_1 to H_7), audit committee effectiveness (H_9 to H_{14}), and ownership structure (H_{16} to H_{19}) have a positive effect on firm performance. The results of model 1 showed good fitness in all estimations using all measurements of performance (i.e., Tobin's Q, ROA, and ROE).

With regard to board of directors' characteristics, Royal family members sitting on the board of directors (*BD_RFAMILY*) showed a significant positive association with firm performance. The results of this thesis are positive and significant in all estimations using all measurements of performance (i.e., Tobin's Q, ROA, and ROE). Therefore, hypothesis H_1 is supported. The existence of this group (Royal family) on the board of directors of Saudi companies indicates higher firm performance because this group has the power and the influence on others to get things done. Moreover, the existence of this

group (as decision makers and owners) closely oversees management and affects decision making which, consequently, enhances firm performance. This study found that board size (*BD_SIZE*) has a significant and positive relationship with Tobin's Q. Therefore, hypothesis H_2 is supported. The result shows that larger board size results in better firm performance. The possible justification behind this result may be that a large board of directors may increase the diversity in terms of members' backgrounds, expertise, and skills, which can generate a greater abundance of ideas that can provide high levels of performance.

Board independence (*BD_INDE*) was found to have an insignificant link with firm performance. Therefore, hypothesis H_3 is not supported. The reasons behind these results are that a significant number of non-executive directors could mean strategic activities are hindered, along with the presence of excessive monitoring, a lack of actual independence, a lack of experience, and too many older and less productive individuals. Some held that non-executive independent directors were under the power of the owner-manager, meaning there was the keen presence of political pressure. Furthermore, the cultural and societal nature, along with the appointment of a board of directors member may be impacted through discrimination and prejudice, were recognized as playing a notable role when choosing members. Such behaviour was recognized as having the potential to impact the independence of the board, which could result in lack of real independence.

Board meetings (*BD_MEETS*) were reported negative and significant with ROA and ROE. Therefore, hypothesis H_4 is not supported, the reason being that the limited time directors spend together is not normally used for a meaningful exchange of ideas among

themselves. In actuality, more mundane activities, such as various formalities and the presentation of reports, take up a large portion of the meeting time, which decreases the time available for efficiently monitoring management. Moreover, members with a financial background sitting on the board (*BD_FINKNOW*) were found to be negatively related to Tobin's Q. Thus, H_5 is not supported. This indicates that when there are more members with a financial background sitting on the board, there will be lower firm performance. To justify this result, these members with financial knowledge may be busy and not have enough time to fulfill their board of directors duties properly.

CEO duality (*CEO_DUAL*) was found to be positively and significantly linked with Tobin's Q and ROA. Therefore, hypothesis H_6 is supported. The justification of these results may refer to the nature of the ownership structure in Saudi Arabia. Most companies in Saudi Arabia are highly concentrated and managed by family, government, and domestic companies. Thus, by having CEO duality, the power and control are in the hands of CEO/Chairman, who can focus on creating and generating the company's fortune. Remarkably, multiple directorships (*BD_MDIR*) were found significantly and negatively linked with ROA and ROE. Thus, the results do not support hypothesis H_7 that companies enhance their performance with multiple directorships (directors sitting on more than one board). A plausible justification is attributed to the nature of the Saudi environment that depends on a strong relationship (friendship or blood relationship) between members that leads to an impairment of choosing incompetent members for the board of directors.

In terms of audit committee's characteristics, outside financial expertise (*AC_OUTFINEX*) does not support hypothesis H_9 that outside financial expertise on the

audit committee enhances firm performance. Moreover, these results do not support agency theory and the recommendations of the Saudi CG Code (2006) that audit committees should comprise at least one member with relevant financial experience for monitoring and controlling firm performance. The justifications of these inconsistent results are that the financial experts do not work full-time on the audit committee because most of the financial experts work for universities or accounting firms. Moreover, the financial expert must obey firm management in order to keep his job or be re-elected as a member of audit committee. This would result in lack of awareness of responsibilities and independence toward company performance.

This study documented that audit committee multiple directorships (*AC_MDIR*) has no significant relationship with firm performance (Tobin's Q, ROA, and ROE). Thus, hypothesis H_{10} is not supported. These results could be justified because those who hold directorships on different audit committees and have additional responsibilities may not be able to adequately monitor management, which could be reflected in declining company performance. Moreover, audit committee size (*AC_SIZE*) showed a negative and significant relationship with firm performance (Tobin's Q). This result does not support hypothesis H_{11} . However, this could be a result of the fact that large audit committee may not necessarily result in more effective functioning, as more members on an audit committee may lead to unnecessary debates and delay decisions.

The findings also revealed that an independent audit committee (*AC_INDE*) has a significant and negative relationship with firm performance (Tobin's Q and ROA) and an insignificant association with firm performance (ROE). Therefore, hypothesis H_{12} is not supported. It is evidenced in these results that the audit committee members in Saudi

companies were not really independent enough to play a serious monitoring role, and the existence of independent members is just to fulfill the requirement of the Saudi Code of CG (2006), but might not be able to exercise their powers. Moreover, independent audit committee members are obligated to the board of directors and, therefore, are not free of political pressure. Over time, the independence of the audit committee members who serve for too long become less powerful monitors.

The results of the study showed that audit committee meetings (*AC_MEETS*) have a negative and significant association with company performance (Tobin's Q and ROE). These results indicate that audit committee meetings do not show diligence and inclination towards investment efforts and time that will increase firm value. Thus, hypothesis H_{13} is not supported. However, these findings are not surprising because the effectiveness of the audit committee depends, to a large extent, upon their diligence or activities, such as the frequency, duration, and content of audit committee meetings. In fact, audit committee effectiveness depends mainly on how successfully its members can carry out their roles and responsibilities no matter their composition. Other findings in this study regarding insider financial expertise of the audit committee (*AC_FINEX*) showed a positive and significant relationship with company performance (Tobin's Q). Therefore, hypothesis H_{14} is supported, and the requirement of the demand made by the Saudi Code of CG (2006) to have one member of the audit committee possess a good level of financial and accounting knowledge is fulfilled. However, according to this result, *AC_FINEX* is able to assist the board to make decisions and thus, enhance company performance.

With regard to the relationship between ownership structure and firm performance, firm performance is affected by the nature of ownership structure. Hence, concentrated ownership may offer extra monitoring mechanisms by affecting the formation of the board of directors and its committees. The four types of ownership examined in this study (model 1) showed a positive relationship with firm performance, which is consistent with agency theory. The first type of ownership in Saudi Arabia is Royal family ownership (*RF_OWN*). This type of ownership was found to be positively and significantly associated with firm performance (Tobin's Q). Thus, hypothesis H_{16} is supported. This indicates that Royal family members in Saudi companies monitor the behaviors of management and others in order to achieve end objectives. The second type of ownership in Saudi Arabia is non-Royal family ownership (*NRF_OWN*), which showed a positive and significant relationship with firm performance (Tobin's Q, ROA, and ROE). Therefore, hypothesis H_{17} is supported. The findings emphasized that the impacts of Saudi family ownership are more likely to be recognized when there is a combination of family ownership with active family control and management. The third type of ownership is government ownership (*GOV_OWN*), which has a positive and significant association with firm performance (Tobin's Q, ROA, and ROE). Therefore, hypothesis H_{18} is supported. These results were expected, because government ownership in some of organizations is recognized as a key CG element enhancing firm performance owing to the fact that government ownership is more influential than other ownerships in opportunistic behaviour mitigation. Finally, as for domestic corporate ownership (*DOMESTIC_OWN*), the results show a positive and significant relationship with firm performance (Tobin's Q, ROA, and ROE). Therefore, hypothesis H_{19} is supported. Domestic corporate ownership in Saudi Arabia delivers a number of important advantages to firms involved in specific business

agreements by decreasing the costs of monitoring the ventures or alliances between firms and their corporate blockholders.

6.2.2 The Results of Model 2

Model 2 includes the hypotheses: board of directors' effectiveness score (H_8), audit committee effectiveness score (H_{15}), and ownership structure (H_{16} to H_{19}) have a positive effect on firm performance. The results in model 2 showed a good fit in all estimations using all measurements of performance (i.e., Tobin's Q, ROA, and ROE).

This study used another line of research centered on utilizing a composite score of the characteristics of the board of directors and a composite score of the characteristics of the audit committee, in order to avoid inconclusive and conflict findings when testing variables individually. In this matter, the combined variables are expected to be a good measure of firm performance when looked at as a group and not individually. This is due to the fact that variables behave in a combining model, which in its turn might explain conflicting findings reported by the previous research that considered each variable in segregation from the others. This may lead to the fact that the power of a single variable depends on the others.

Board of directors' effectiveness score (*BDE_SCORE*) includes Royal family members, suitable board size, independence of directors, frequent meetings, adequate financial knowledge, absence of CEO duality, and presence of multiple directorships. The results showed a positive and significant association of board of directors' effectiveness score with firm performance (Tobin's Q). Therefore, hypothesis H_8 is supported. The higher the degree of the board of directors' monitoring effectiveness, the more involved and

effective the board becomes in increasing firm performance. The results also suggest that combining agency, stewardship, and resource dependence theories can provide more and sufficient interpretations about firm performance in Saudi Arabia, where civilization priorities dominate the business environment and decision making.

Audit committee effectiveness score (*ACE_SCORE*) includes the existence of outside financial expertise, suitable audit committee size, independence of audit committee members, adequate financial knowledge, multiple directorships, and frequent meetings. The results showed a positive and significant association of audit committee effectiveness with firm performance (Tobin's Q, ROA, and ROE). Thus, hypothesis H_{15} is supported. The higher the degree of the audit committee's monitoring effectiveness, the more involved and effective the audit committee becomes in increasing firm performance. However, the results of this study support examining audit committee mechanisms as a group rather than individually. A possible justification is that the individual characteristics of the audit committee, as they complement or act as alternate to one another, have more impact on the company's performance in Saudi Arabia.

Remarkably, ownership structure results exhibited by model 2 are consistent with those presented by model 1. Both models are positively and significantly associated with firm performance. As for Royal family ownership (*RF_OWN*), non-Royal family ownership (*NRF_OWN*), government ownership (*GOV_OWN*), and domestic corporate ownership (*DOMESTIC_OWN*), they have positive and significant relationships with firm performance (Tobin's Q, ROA, and ROE). Thus, hypotheses H_{16} , H_{17} , H_{18} , and H_{19} are supported. Therefore, the prediction made regarding ownership structure enhancing firm performance is supported in Saudi Arabia. Perhaps this is because of the influence of the concentrated

ownership structure and because most companies in Saudi Arabia are held by families. Moreover, these results are consistent with agency theory, which suggests that the ownership structure maximizes their wealth and shareholders' wealth.

6.3 Implications of the Study

This thesis explicitly investigates the association between CG mechanisms (board of directors, audit committee, and ownership structure) and firm performance in the context of Saudi Arabia. Fundamentally, this study provides new evidence from a developing country such as Royal members on the board, an audit committee with outside financial expertise, ownership structure, policymakers, and management and stakeholders on the effect of monitoring mechanisms on firm performance. The implications of the study regarding theory, policymakers, management and stakeholders, and academia will be discussed in the following section.

6.3.1 Implications for Theory

Previous studies have documented consistent links between CG mechanisms and firm performance under agency theory (Eisenhardt, 1989; Jensen & Meckling, 1976), stewardship theory (Donaldson & Davis, 1991; Nicholson & Kiel, 2007; Muth & Donaldson, 1998) and resource dependence theory (Hillman & Dalziel, 2003; Roberts, McNulty & Stiles, 2005; Nicholson & Kiel, 2007), but the theories are not without contradictions.

In terms of agency theory which is the dominant approach, the relationship between principal, (i.e. shareholder) and agent, (i.e. decision-maker) are not clearly seen in Saudi

Arabia as compared to other developing countries. This is because most of the companies are owned by Saudi families including the Royal families. The conflicts are not so much between agents and principal but rather the conflict is between principal and principal which is very unique to Saudi market.

Looking at this result from the perspective of resource dependence theory and stewardship theory, the separation was found to be more pronounced in this thesis. This is because the owner also acts as the resource or steward for the firm. Thus, the owner/resource or owner/steward works for the benefit of the firm, and ignores his own benefits. This clearly appears in the board of directors when the dominance of Saudi owners, affected by political ties and family involvement, may reduce the board's capability to play its role properly (i.e., monitoring, controlling, and addressing various agency problems). In addition, Saudi firms, on average, do not choose their board members in the optimal way. This may lead to deficiency of communication and cooperation, and affect problems in decision making. These practices negatively affect CG practices and firm performance.

Markedly, the results reported of the association of audit committee characteristics and firm performance in individual and combined examinations support the substitution hypothesis of corporate mechanisms as monitoring devices. The association of individual audit committee characteristics with firm performance was unclear and conflicting when compared to the extant research. On the other hand, comparing the same characteristics as one score with firm performance showed identical results in accordance with agency theory and its related substitution hypothesis. As a consequence, using a combined score of audit committee characteristics is considered valuable in shrinking agency costs and

safeguarding the shareholders' interests owing to the effectiveness of CG achieved through various channels, and when specific mechanisms' effectiveness hinges on the effectiveness of other factors. Along the same line, audit committee characteristics, when examined as a group of mechanisms, complement or act as an alternate for each other. In addition, the measurement of the combined impact of audit committee characteristics indicates a stronger effect on firm performance as compared to measurement of individual impacts.

With respect to the relationship between ownership structure (Royal family, non-Royal family, government ownership, and domestic corporate ownership) and firm performance, all results are significant and positive. Therefore, management in Saudi companies is highly influenced by these groups, which consequently impacts firm performance.

6.3.2 Implications for Practice

The findings could be important to investors, stakeholders, companies, regulators, and the public in general in their attempts to constrain the incidence of firm performance and improve the quality of CG mechanisms in a number of ways. First, the results from this thesis provide precious information for current and prospective investors and stakeholders, enabling better understanding of CG mechanisms that apply to companies in Saudi Arabia and their effects on firm performance. Consequently, when an investor or a stakeholder wants to make a decision about a company, the focus will be on the annual reports issued by the company. This trend of investors and stakeholders enforces Saudi listed-companies to comply with CG mechanisms properly. This could be helpful

to improve and develop CG practices in Saudi Arabia by revising requirements and applying practical guidelines to maintain the actual and perceived understanding of some rules. For example, the results of this study find that there are companies that do not comply with the CEO duality and independence of outside directors rules, and this is not supported by the code of CG in Saudi Arabia. Firms with CEO duality (separate roles of CEO and board chairperson) show higher firm performance than those with non-CEO duality. In terms of independence of outside directors, there is a lack of actual independence of boards of directors. Therefore, Tadawul in Saudi Arabia should provide more flexibility to companies and provide suggestions to CMA to find solutions to improve the CG code in Saudi Arabia.

Second, the results from this thesis show that the role of the audit committee in Saudi companies does not support firm performance. This may stem from nepotism in selecting members, less compensation, unclear responsibilities, lack of independence, lack of knowledge, and working part-time. Therefore, these results also have implications for developing the role of audit committees in the CG code in Saudi Arabia. Third, although the results regarding ownership structure with firm performance were positive, the regulations, including CMA, should take into consideration ownership in Saudi Arabia to develop the role of ownership structure in the CG code. Fourth, the results of this thesis provide practical implications to managers in Saudi-listed companies to understand how boards of directors, audit committees, and ownership structure influence firm performance. This understanding would help managers choose appropriate methods in dealing with the board of directors, audit committee, and ownership structure to improve firm value.

6.3.3 Implications to Academia

The results of this thesis could be important to the academic and research communities, especially with the lack of formal studies addressing the issues of the relationship of CG mechanisms and firm performance in Saudi Arabia. Thus, this thesis would provide them with substantial information about issues in the market of Saudi Arabia. This thesis supports the body of knowledge and the growing literature regarding CG mechanisms and firm performance.

This thesis focuses on boards of directors, with certain members with special characteristics, including having a strong influence on decision making. These members are seen to be more powerful than others; meaning that some individuals with a greater degree of power impact the actions and views of others in such a way that gets things done. Moreover, this thesis contributes to academic knowledge in a distinctive aspect of the listed companies in the context of Saudi Arabia, which is the effect of an outside financial expert assigned as a member of the audit committee. Usually this outside financial expert is not a member of the board of directors or an employee of the company, but is assigned to the audit committee for his knowledge base and experience in financial affairs. In addition, this thesis introduces a uniqueness of Saudi Arabia ownership structure—Royal family ownership, non-Royal family ownership, government ownership, and domestic corporate ownership—and how this ownership domination and classification are related to firm performance in Saudi Arabia.

6.4 Limitations of the Study and Suggestions for Future Research

Like any study in social science, there are limitations to the design used and suggestions for future research. The main limitations and suggestions of the study are as follows:

First, this thesis collected data from the annual reports published by listed companies in Tadawal. Some observations were dropped as outliers, since the size of the final sample was 573 observations for years between 2007 and 2011, and the results might not be applicable to small and unlisted companies. Similarly, the data was based on the date of introduction the Saudi CG code in 2006. Perhaps the data, especially before the implementation of the CG code, might yield different results. Future studies should compare the effect of the CG code before and after the implementation. Moreover, there is a possibility to extend this test to cover other countries that have similar features and business environments like GCC, or different regulations, practices, and economic factors such as MENA countries, in order to determine the validity of this thesis' findings in other economies.

Second, this thesis employs the panel data approach, which is robust in analyzing longitudinal data. Some behavioral and cultural issues might not be taken in the model. Specifically, lacking a theory which ensures that all variables influencing firm performance are included in one model, findings obtained from CG mechanisms and firm performance may not be reliable and accurate (Aljifri, 2007). Future studies might consider interviews and questionnaires as research instruments, and the use of alternative analytic techniques might explore some observations from another

perspective. Thus, the results of the interviews and questionnaires may support the results obtained from the secondary data.

Third, the present thesis used the 5 percent level as a cut-off point for determining the presence of the ownership structure (Royal family ownership, non-Royal family ownership, government ownership, and domestic corporate ownership), which was somewhat arbitrary. However, this criterion was provided by the CG code in Saudi Arabia (CMA, 2013) to describe “substantial shareholder.” Future lines of research may consider testing other forms of ownership that might affect firm value, such as blockholders with less than 5 percent.

Fourth, this thesis examines the effect of CG mechanisms on firm performance for listed companies which are fully compliant with Saudi Accounting Standards. Future studies may replicate this thesis using the applications of International Financial Reporting Standards (IFRS) in all listed companies in Saudi Arabia, which would lead to enhancing the quality of decision making in order to enhance firm value.

Fifth, the existence of CG mechanisms does not necessarily serve as a proxy for good CG, such as the existence of an audit committee in some listed companies might be more “image management” than serving any real controlling purpose, in order to enhance firm value. Therefore, future research may control for more CG variables to determine how CG mechanisms influence firm value.

Finally, this thesis is conducted in a country (Saudi Arabia) that is based on Islamic concepts and values, but there are no direct determinants examining the role of Islamic concepts and values on firm performance. A future study might make comparisons

between the results obtained in this thesis and the results obtained from companies in non-Islamic countries to explore the concepts of Islamic CG practices.

6.5 Conclusion

In summary, this thesis discusses the relationship between CG mechanisms (board of directors, audit committee, and ownership structure) and firm performance in Saudi Arabia. This thesis supports our understanding of the effect of CG characteristics on firm performance, especially in the Saudi environment that has high percentages of family ownership with high degrees of market power, political relationships, and Islamic culture.

The results of this thesis provide evidence that the environment of Saudi Arabia is different and distinct from Western countries. As for board of directors effectiveness, the results span from negative to non-significant to positive relationship with firm performance. For example, the results showed a positive relationship of Royal family members, board size and CEO duality with firm performance. Board meetings, board financial background and multiple directorships were found to have a negative relationship with firm performance. The result of board independence with firm performance was insignificant. Thus, the findings of this thesis recommend that regulatory authorities enhance the role of the board of directors for companies in Saudi Arabia.

The results also show a positive association of financial expertise and a negative relationship of outside financial expertise, size, independence, and meetings with firm performance. In addition, firm performance has an insignificant relationship with multiple directorships. Therefore, it is recommended that regulatory authorities develop the role of the audit committee to cope better with the environment of Saudi Arabia.

According to the results comparing ownership structure with firm performance, ownership structure can serve as a substitute for audit committee and board of directors effectiveness in mitigating agency problems. In companies controlled by family (Royal or non-Royal), government and domestic corporate ownership may play a complementary role. Hence, the regulatory authorities in Saudi Arabia should revise and promote the reform of the current CG code to take into consideration the Saudi environment. Family, government, and domestic corporate ownership should reinforce their consideration of responsibilities to investors, strengthen their internal control systems, and ensure an appropriate and balanced board structure, which includes independent directors with a financial background, and frequent meetings.

The findings from this thesis may differ from previous studies for several methodological reasons. First, this thesis covered five consecutive years, from 2007 to 2011. This period is characterized by many important events such as the financial crisis (either locally or internationally) and introducing the Saudi CG code in 2006. Second, based on factor analysis findings, board of directors' effectiveness score is constructed from board Royal family members, board size, board independence, board meetings, board financial knowledge, CEO duality, and board multiple directorships. In addition, audit committee effectiveness score is constructed from audit committee outside

financial expertise, multiple directorships, size, independence, meetings, and financial expertise. The linked board of directors' characteristics and audit committee characteristics as a whole catch the power of their effect on firm performance with the inclusion of two new variables: Royal members on the board and outside financial experience on the audit committee. Therefore, when these characteristics perform in a substitutable or complementary fashion in making decisions, board of directors' and audit committee characteristics should be tested as group and not separately from each other. In particular, the evidence is consistent with the board of directors' score and audit committee score being perceived by the members of the board of directors or the audit committee as the decision makers and controllers most effective in signaling the board of directors and audit committee as a composite affecting firm performance.

However, not all elements of measured effectiveness of the board of directors and audit committee are important as the study finds with testing board of directors characteristics and audit committee characteristics. Nevertheless, the study provides support for the role of elements of measured effectiveness of the board of directors and audit committee when aggregated together in enhancing the two new variables namely board Royal family members introduced to the board of directors' effectiveness score and the audit committee outside financial expertise introduced to audit committee effectiveness score on firm performance. This study might be the first to include linking CG mechanisms with firm performance by giving attention to the variables related to decision making and ownership.

The findings of this study will be useful to the regulators in deliberating policies on issues related to CG since its implementation influences the firm performance.

Saudi government, stock market, and accounting and auditing regulators would gain some new insights from this study in terms of the extent to which regulations, laws, decrees, and resolutions are implemented by Saudi listed companies. Thus, regulators would be able to decide the whats, whens and hows CG mechanisms is carried on in Saudi context.

The most important conclusion that can be drawn from this thesis is that CG is practiced by Saudi Arabian companies. Perhaps the CG code in Saudi Arabia should be revised to become more suitable to the Saudi business environment. For example, the separation between the CEO and chairman in the Saudi environment might affect firm performance. This because the separation between owners and managers are less clear in Saudi Arabia.

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