View metadata, citation and similar papers at core.ac.uk
brought to you by CORE
provided by FADA - Birzeit University

Managerial Auditing Journal

Does audit committee substitute or complement other corporate governance mechanisms: Evidence from an emerging economy

Yousef Hassan, Rafiq Hijazi, Kamal Naser,

Article information:

To cite this document:
Yousef Hassan, Rafiq Hijazi, Kamal Naser, (2017) "Does audit committee substitute or complement other corporate governance mechanisms: Evidence from an emerging economy", Managerial Auditing Journal, https://doi.org/10.1108/MAJ-08-2016-1423
Permanent link to this document:
https://doi.org/10.1108/MAJ-08-2016-1423

Downloaded on: 15 August 2017, At: 04:46 (PT)
References: this document contains references to 119 other documents.
To copy this document: permissions@emeraldinsight.com
Access to this document was granted through an Emerald subscription provided by emerald-srm:523001 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

The current issue and full text archive of this journal is available on Emerald Insight at:
www.emeraldinsight.com/0268-6902.htm

Corporate governance mechanisms

Does audit committee substitute or complement other corporate governance mechanisms

Evidence from an emerging economy

Yousef Hassan
Department of Accounting, Birzeit University, Birzeit, Palestine

Rafiq Hijazi
College of Business, Al Ain University of Science and Technology, Al Ain, United Arab Emirates, and

Kamal Naser
Kuwait Fund, Cardiff, Wales

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

Abstract

Purpose – The purpose of this paper is to examine the relation between audit committee (AC) and a set of other corporate governance mechanisms in one of the emerging economies, United Arab of Emirates (UAE). In particular, the current study examines whether an effective AC can serve as a substitute or as a complement mechanism to board characteristics and ownership structure of Emirati listed non-financial companies.

Design/methodology/approach – Using substitution and complementary theories, a panel data from 48 nonfinancial companies listed on the UAE Stock Exchanges [Abu Dhabi Stock Exchange and Dubai Financial Market] during the period between 2011 and 2013 were used in the current study. A composite measure of four proxies has been used to measure the AC effectiveness, namely, AC size, independence, financial expertise and diligence. To test the hypotheses formulated for the study, a logistic regression model was used to identify the influence of a set of board characteristics and ownership structure variables on the effectiveness of the AC after controlling for firm size, auditor type, industry type and profitability.

Findings – While AC effectiveness appeared to be positively associated with board size and board independence, it is negatively associated with CEO duality. This points to a complementary governance relation. On the other hand, the negative relationship between AC effectiveness and each of institutional and government ownership suggests substitutive relations.

Research limitations/implications – The main shortcoming of the current study is that it examines the influence of a certain set of corporate governance factors on the effectiveness of AC. Other corporate governance mechanisms may, however, contribute to the effectiveness of AC. The findings of the study can be used by companies' managements and regulators in the UAE to improve the corporate governance system.

Originality/value – To the best of researchers' knowledge, this study provides the first evidence about the interaction among multiple governance mechanisms required by the code of corporate governance issued by the UAE Ministry of Economy in 2009. The current paper is expected to add to the limited AC literature in Middle East and North African countries in general and Arab World in particular.

Keywords Ownership structure, Emerging markets, UAE, Corporate governance, Audit committee

Paper type Research paper

Introduction

Corporate governance consists of internal and external systems, rules and practices by which a company is directed and controlled to ensure that stakeholder interests are

Managerial Auditing Journal
© Emerald Publishing Limited
0268-6902
DOI 10.1108/MAJ-08-2016-1423

balanced. Corporate governance became a pressing issue following the serious corporate scandals that occurred in different countries all over the world. To react to such scandals, sets of corporate governance regulations and codes have been established in different developed and emerging countries to improve corporate governance practices. The Middle East and North Africa region countries, including the United Arab Emirates (UAE), of course, were no exception. Consequently, recent years witnessed significant efforts exerted by the UAE to promote the adoption of best corporate governance practices. Good progress has been achieved in improving the quality of corporate governance for listed companies on the UAE Stock Exchanges by adopting "Governance Rules and Corporate Discipline Standards" in 2009 effective 30 April 2010. By improving corporate governance, the country expects to bring wide-ranging benefits to the economy from improving its corporate governance such as enhancing international competitiveness, attracting local and foreign investment and building modern financial and capital markets (OECD, 2005).

Any sound governance system is concerned with the interaction between the company and its stakeholders, namely, shareholders, lenders, employees, local community, environmental activists, customers and suppliers, as well as with its compliance with legislation and regulations. However, the interactions of these different parties may result in many conflicts. We believe that exploring how various corporate governance mechanisms combine and interact is of great importance to identify the optimal and the most efficient corporate governance system for a given economy. The interaction between different corporate governance mechanisms is one of the most important insights in recent corporate governance research (Aguilera and Crespi-Cladera, 2012). Prior research has documented that monitoring mechanisms work together as either complements or substitutes. The complementary hypothesis offers an explanation to the synergistic effects among various corporate governance mechanisms. According to this hypothesis, different elements of corporate governance structures are interrelated (Aoki, 2002) which means that the adoption of one mechanism increases the effectiveness of others and vice versa (Cassiman and Veugelers, 2006). In this respect, researchers such as Cremers and Nair (2005) and Acharya *et al.* (2011) argued that effective external governance mechanisms reinforce the effectiveness of internal governance mechanisms. The alternative argument, however, states that alternative corporate governance devices operate as substitutes for one another (Fernández and Arrondo, 2005). In this regard, Giroud and Mueller (2011) found that internal and external corporate governance mechanisms can be substituted, while Gillan *et al.* (2006) provided evidence that one internal corporate governance mechanism (board structure) acts as a substitute for another (charter amendments).

The audit committee (AC) is a key internal governance mechanism required by the UAE corporate governance code. The current study investigates whether the presence of an effective AC is a substitute or complement for other corporate governance reforms, namely, board characteristics and ownership structure in the Emirati listed non-financial companies. The board of directors, AC and blockholders are the primary monitoring mechanisms in the UAE. The importance of these variables in the UAE context will be highlighted in the next section that reviews the institutional background of the corporate governance code in the UAE.

This paper sets out to achieve two objectives. The first objective is to investigate the relationship between AC effectiveness and other corporate governance mechanisms (board characteristics and ownership structure) among non-financial companies listed on UAE Stock Exchanges during the period 2011-2013. The second objective is to test the validity of two competing theories (substitution and complementarity). Therefore, the fundamental

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

research question addressed in the current study is whether the firm's AC in the UAE acts as a substitute or complements other corporate governance mechanisms.

We believe the interaction between different corporate governance mechanisms in the Emirati context and understanding the relationships among such mechanisms are extremely important to enhance the efficiency of the UAE Stock Exchanges. A number of reasons motivate the choice of the UAE as the setting for this study. First, as the country's establishment in 1971, the UAE economy has experienced remarkable growth to become one of the Middle East's most important trading areas. According to the UAE State of Green Economy Report 2014, the nominal gross domestic product of the UAE has grown 27 times since 1975, and the economy has become the second largest in the Arab world (after Saudi Arabia) in 2014[2]. Due to this rapid transformation in the economy, the UAE has become a key focus for international corporations as well as personal and institutional investors (Obay, 2009). Second, the study examines the interaction among multiple governance mechanisms required by the code of corporate governance issued by the UAE Ministry of Economy in 2009. Third, in 2013, the UAE capital market was upgraded from "frontier" to "emerging" market status by the Morgan Stanley Capital International (MSCI) Emerging Markets Index. This upgrade reflects international and institutional investors' realization of how far the UAE economy and capital market have developed in recent years. To enhance confidence in this upgrade, adopting sound corporate governance practices helps in attracting more international and institutional investors, and thus, companies can raise capital efficiently and effectively, given that the UAE market is still characterized by a significant degree of ownership concentration (Obay, 2009; Hussainey and Aljifri, 2012).

This paper contributes to a very limited empirical literature on the interaction between different corporate governance mechanisms in emerging economies, generally, and the Middle East countries, particularly. According to Al-Baidhani (2014), the institutional setting in emerging economies requires a different bundle of corporate governance mechanisms than developed countries as corporate governance conflicts in emerging economies are mainly principal-principal rather than principal-agent. According to DeFond and Francis (2005), while it is important to understand the manner in which competing governance mechanisms interact, there is a lack of research on such interaction. Furthermore, the current study measures AC effectiveness using a composite index comprising four AC characteristics (AC size, independence, financial expertise and diligence). Most of the limited literature that has investigated AC effectiveness has used only one dimension to measure AC effectiveness (Raghunandan and Rama, 2007; Greco, 2011; Al-Najjar, 2011). Thus, it seems that there is a significant knowledge gap regarding the interaction between various corporate governance reforms, especially the relationship between AC effectiveness and other governance mechanisms. Conducting such research will help fill that gap in the existing literature.

In addition to contribution to the scarce literature on the interaction between various corporate governance mechanisms in emerging economies, several parties would benefit from the findings of this study. UAE authorities could use the findings to assess the relationship between a key corporate governance mechanism (AC) and other corporate governance practices (board of directors and ownership structure) several years after adopting the code. By understanding the association between different governance mechanisms, UAE regulators and policy makers can assess key governance strengths and weaknesses that would help them to improve and adopt an optimal governance system constituted from interacting governance mechanisms. Policymakers and regulators in other Middle Eastern countries, especially Gulf Cooperation Council (GCC) states, would benefit from the outcome of the study, as they share a similar social, political and economic

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

environment with the UAE. Finally, the study findings address foreign investors' concerns related to governance issues they usually take into account when making investment decisions. It is believed that foreign companies may be encouraged to practice their business in the UAE not only for being the main gateway to enter the Middle East market or for its modern infrastructure but also for the confidence in the stability of the country's economy and stock markets. Therefore, this study highlights the important role that sound corporate governance plays in financial stability by underpinning financial market integrity and economic efficiency and, thus, can enhance local and foreign investors' confidence.

The rest of the paper is organized as follows. A brief overview of corporate governance in the UAE is presented in the following section. A literature review covering variables that are expected to interact with the AC in the UAE context together with hypotheses development are provided in Section 3. The study methodology is presented in Section 4, and the study findings are summarized in the Section 5. The conclusion is offered in the last section.

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

Corporate governance in the UAE

In 2007, the Securities and Commodities Authority (SCA) issued the Corporate Government Code expanding government rules and requirements that should be followed by companies listed on the UAE stock markets (Abu Dhabi and Dubai). The code is mainly derived from international standards. Two years later (2009), the Ministry of Economy issued Ministerial Resolution No. 518 amending SCA's code and providing more comprehensive corporate governance rules (the Corporate Governance Code) and discipline standards. The resolution asked all companies authorized by the SCA to operate in the UAE and listed on UAE stock markets to comply with the Corporate Governance Code with effect from 30 April 2010. However, the 2009 governance code does not apply to government owned institutions; Central Bank regulated entities or foreign companies. The code sets out principles and standards of good practice related to issues such as the board of directors (its responsibilities, composition, committees and directors' remuneration), internal control systems, risk management, shareholders' rights and the appointment and discharging of the external auditors.

The board-related provisions include:

- at least one-third of board members must be independent directors and the majority must be non-executive directors;
- the positions of chairperson and the company manager and/or managing director should not be occupied by same person; and
- the board of directors shall meet at least once every two months.

However, one of the problems faced by the UAE code of governance during the transition period is related to the effectiveness of the board of directors (Baydoun *et al.*, 2013; Hassan, 2015). Baydoun *et al.* (2013) argued that in the UAE, similar to other GCC countries, it is difficult to find genuinely independent non-executive directors who contribute significantly to corporate governance due to the small population of potential directors. Although Hassan (2015) confirmed this argument, he noted that independent and non-executive directors could act as change agents encouraging and supporting the adoption of new ideas obtained from knowledge possessed from working in other companies promoting new ideas such as the enhancing the role of the AC (Hassan, 2015).

The UAE code also stipulates that the board of directors must form an AC consisting of at least three non-executive board members, a majority of the members must be independent directors and at least one member must be a financial and an accounting expert. The

committee shall meet at least once on a quarterly basis or whenever necessary. Shehata (2015), who discussed and compared corporate governance codes in GCC countries, argued that the AC in the UAE, like all other GCC countries, is considered a cornerstone in corporate governance (Shehata, 2015). Shehata (2015) found ACs in these countries' codes, including the UAE, carry out the following responsibilities:

- overseeing the integrity of the financial statements;
- monitoring the effectiveness of the internal audit function; and
- recommending to the board the appointment of the external auditor.

The ownership structure is another concern encountered by the Emirati governance code during the transition period. Ownership structure is one of the key corporate governance mechanisms and is widely considered to interact with other corporate governance characteristics (La Porta *et al.*, 1998). Unlike corporations in the developed countries, characterized by widely dispersed ownership, the UAE corporations are dominated by highly concentrated ownership and controlled by a few controlling shareholders (Obay, 2009; Hussainey and Aljifri, 2012; Baydoun *et al.*, 2013; Hassan, 2015). Thus, the main problem in the UAE lies in the conflict between major shareholders and weak minority shareholders (Su *et al.*, 2008; Lins, 2003). According to Hassan (2015), this distinctive institutional feature appears to undermine non-executive directors' independent monitoring and supervisory functions.

The external auditor, according the UAE governance code, shall be nominated by the board of directors based on a recommendation presented by the AC. However, the general assembly of the company must approve the appointment and remuneration of the external auditor. While engaged in auditing a company's accounts, external auditors are not allowed to provide technical, administrative or consultation services that may conflict with their independence.

Previous related studies and hypotheses development

Dependent variable

Over the past few decades, considerable attention has been paid to the role of the AC as a mechanism that enhances financial reporting. Early research has investigated factors that might affect the formation of an AC and the influence of an AC on the quality of financial reporting. However, this stream of research was criticized by some researchers (such as Turley and Zaman, 2004; Firth *et al.*, 2007) who argued that the mere establishment of an AC does not necessarily indicate it functions effectively. Therefore, the past decade witnessed increasing research efforts to investigate factors affecting the quality and effectiveness, not merely the formation, of the AC. The AC's effectiveness has been measured using various AC characteristics such as AC size (Krishnan, 2005), AC independence (Krishnan, 2005; Zhang *et al.*, 2007), financial expertise of the committee members (Krishnan, 2005; Zhang *et al.*, 2007) and AC diligence (Abdel-Meguid *et al.*, 2014).

An AC with sufficient members is expected to strengthen the effectiveness of the AC in executing its oversight and monitoring function. A large AC provides a greater monitoring function, as it has more members to undertake various monitoring tasks (Anderson and Reeb, 2003). Moreover, an AC with an appropriate number of members enables members to employ their experience and expertise for the benefit of the stakeholders (Pearce and Zahra, 1992) as well as to identify and address potential problems in the financial reporting (Felo *et al.*, 2003; Bedard *et al.*, 2004). In this regard, Kyereboah-Coleman (2007) argued that an AC should consist of at least three members.

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

A key feature of an effective AC is its independence from management. Extant literature provides empirical support that an AC with independent directors provides substantial benefits to the corporation and its stakeholders. Lam (2000) and Raghunandan and Rama (2007) argued that AC independence enhances auditor independence and improves transparency in financial reporting. Other researchers found that AC independence is associated with a lower level of earnings management practices (Saleh *et al.*, 2007).

The financial expertise of the AC is another key dimension of AC effectiveness. According to Raghunandan *et al.* (2001), ACs with financial expertise have greater interaction with the internal auditors. Moreover, AC members with financial expertise are more likely to support external auditors in conflict situations with management (Dezoort and Salterio, 2001) and are less likely to experience internal control problems (Krishnan, 2005). Therefore, contemporary regulations and best practices either require or recommend AC members to possess a certain level of financial competencies. Some authors documented that financial expertise of AC members plays a significant role in constraining earnings management (Saleh *et al.*, 2007; Nelson and Devi, 2013), whereas companies that have ACs with less financial expertise are more likely to be identified with an internal control weakness (Zhang *et al.*, 2007).

AC diligence, measured by the number of AC meetings, is also used by previous literature to measure AC effectiveness (Kyereboah-Coleman, 2007; Mohid Rahmat *et al.*, 2009). ACs need to meet regularly to ensure that the financial reporting process is functioning properly. In this respect, McMullen and Raghunandan (1996) suggested that AC that meets more frequently is expected to be better in examining the accounting and internal control system as well as in informing top management concerning the committee's actions. Abbott *et al.* (2004) suggested that an AC that meets at least four times a year is negatively associated with the occurrence of earnings management.

Drawing from the work of DeZoort and Salterio (2001) and Klein (2002), the current study argues that an AC with greater size, independence, financial expertise and diligence will be more effective in its role. In this study, these four features of the AC are combined together in one index and will be used as a dependent variable to measure AC effectiveness.

Independent variables

Many empirical studies have shown some corporate governance features influence the effectiveness of ACs. This study uses some of these governance mechanisms as independent variables. These variables and the rationale behind including them in the study are discussed below.

Board characteristics. The board of directors is typically central to corporate governance, as its relationship with shareholders and management and other primary participants is critical. It is argued that the board of directors is the most important mechanism used in minimizing agency cost arising from the separation between ownership and management (Fama and Jensen, 1983; Belkhir, 2009). The effectiveness of the board in its monitoring function depends on certain characteristics. These characteristics include, among others, its size, independence and CEO duality.

Two main arguments were advanced in literature to explain the role of the board size in enhancing monitoring management. First, proponents of large boards argued that larger boards are more effective in their monitoring function than small ones. Large boards are able to commit more time and efforts to monitor management than smaller ones (Monks and Minow, 2004) and can distribute the workload over a greater number of directors (Klein, 2002). Moreover, large boards reduce management dominance (Hussainey and Wang, 2010) and provide better collective experience and expertise (Akhtaruddin *et al.*, 2009). Some

studies documented a positive relationship between the board size and the existence or effectiveness of the ACs (Bradbury, 1990; Piot, 2004; Firth *et al.*, 2007). In a recent study, Abdel-Meguid *et al.* (2014) found a positive relationship between the board size and the effectiveness of ACs in Egypt. Another recent study by Hassan and Hijazi (2015) found a positive (although insignificant) relationship between board size and the existence of an AC in Palestine. On the other hand, proponents of small boards suggested that large boards are more likely to face communication and coordination problems between members (Jensen, 1993; Cheng, 2008) and thus would slow the decision-making process (Yermack, 1996). Therefore, as smaller boards have the advantage of less coordination costs, they are able to monitor the firm without establishing ACs or delegating part of their responsibilities to ACs (Bushman *et al.*, 2004; Piot, 2004).

Board independence is a key attribute to an effective board and has been the focus of most corporate governance reforms across the world. It has been argued that for the board to be an effective monitor, it must comprise a majority of independent outsiders. A higher percentage of outside independent directors on the board may reduce the divergence between the interests of shareholders and management and may prove more efficient in the monitoring and advising functions and thus would improve management performance (Andres *et al.*, 2005). Board independence has been found to be significant in mitigating agency costs (McKnight and Mira, 2003; Henry, 2004) and improving corporate performance (Prentice and Spence, 2007; Chau and Gray, 2010).

CEO duality refers to the situation when the same individual occupies both the Chief Executive Officer (CEO) and board chair positions in a corporation. CEO duality has been the subject of an ongoing debate between two schools of thought, agency theory and stewardship theory. Agency theorists argue that the CEO duality leadership enables the concentration of power and authority in one person, enabling him/her to dominate the board and thus reduces board effectiveness in its monitoring and controlling functions (Fama and Jensen, 1983; Westphal and Zajac, 1998). Habib and Hossain (2012) concluded that CEO duality might prevent the board from properly monitoring the actions of the CEO and thus compromise the firm value and performance. Therefore, agency theory recommends separation between CEO and board chair functions, as this separation would result in more effective monitoring. In contrast, stewardship theory argues that CEO duality leadership can better serve the firm and its shareholders (Davis *et al.*, 1997). According to this theory, the duality structure establishes strong and unambiguous leadership embodied in a unity of command and companies with CEO duality can make better and quicker decisions (Donaldson and Davis, 1991). Empirical evidence, however, on CEO duality is mixed and inconclusive.

The arguments and findings discussed above on how the attributes of a board might influence the effectiveness of other governance mechanisms generally, and the ACs specifically, are mixed, and the direction of the effect is not uniform. As a result, the following hypothesis will be tested:

H1. An effective board acts as a complement (substitute) mechanism for AC effectiveness.

Ownership concentration. Corporate ownership structures vary among companies and across countries. While in some companies ownership is dominated by controlling shareholders (concentrated ownership structure), ownership in other companies is widely dispersed with many individual shareholders each of whom has a small number of shares. Most prior studies claimed that dispersed ownership is a common denominator across the Anglo-American countries. The basic conflict of interest in the Anglo-American countries

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

(notably the USA and the UK) is between strong managers and widely dispersed weak shareholders principal-agent (PA) conflict. Research showed increasing ownership concentration is used in these countries as an internal mechanism to mitigate agency conflict between shareholders and managers (Anderson and Reeb, 2003). Large shareholders such as government representatives, institutional investors and investors with large holdings are likely to have more incentives and resources to efficiently monitor management (Jensen and Meckling, 1976; Schleifer and Vishny, 1986). Many studies (Feldmann and Schwarzkopf, 2003; Pucheta-Martínez and De Fuentes, 2007) documented that ownership concentration and AC are complementary mechanisms of corporate governance. Although concentrated ownership mitigates PA conflict in developed markets, it could be a major cause of the PP conflict in emerging markets (Lin and Chuang, 2011; Peng, 2009; Yiyi *et al.*, 2008). The PP conflict is regarded as a major problem in emerging markets which are characterized by lack of legal protection and weak governance, including expropriation of minority shareholders (Claessens *et al.*, 2000; Faccio *et al.*, 2001; Mitton, 2002). Large shareholders usually participate in management themselves or appoint representatives to the board and management positions (La Porta *et al.*, 1998) and thus have a high level of influence to enhance their interests at the expense of minority shareholders who have little influence. Therefore, many studies have shown negative association between ownership concentration and firm performance (Filatotchev *et al.*, 2001; Ivashkovskaya and Stepanova, 2011; Stančić *et al.*, 2012). This implies that ownership concentration may serve as a substitute to other governance mechanisms, such as the AC, in monitoring management.

Ownership structure in UAE companies is characterized by a significant degree of institutional and government ownership concentration. Hussainey and Aljifri (2012) reported that 30 per cent of UAE listed companies are held by institutional investors, and 11 per cent are owned by the government. This study identified three major categories of ownership concentration in the UAE: government ownership, institutional investors and investors with large holdings. Like some emerging economies, although the conflict of interest between shareholders and managers (PA conflict) still prevails in the the UAE context, companies in the country further suffer from a severe information asymmetry between majority and minority shareholders (PP conflict) (Su *et al.*, 2008; Rogers *et al.*, 2008). As such, to examine whether UAE listed companies use ownership concentration to complement or substitute for other corporate governance mechanism (e.g. the AC), the following hypothesis is developed:

H2. Ownership concentration acts as a complement (substitute) mechanism for AC effectiveness.

Control variables

Besides the use of the independent variables, the model also uses four control variables: firm size, auditor type, industry type and firm's profitability. Previous literature suggests that these variables can influence sound corporate governance structure. Many studies in recent literature pointed to a positive association between firm size and internal monitoring (Boone *et al.*, 2007; Guest, 2009). Large companies are vulnerable to high agency costs resulting from conflicts between management and stakeholders and tend to reduce such costs by adopting sound governance mechanisms such as effective ACs. Moreover, as large companies are more likely to seek external finance than small ones, they tend to establish a good governance structure to attract and assure prospective investors in the capital market. A positive link between firm size and AC formation has been reported by prior scholars (Firth *et al.*, 2007; Benzing *et al.*, 2011). In this respect, it is important to mention that the

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

average size of Emirati companies listed on the national stock exchanges is relatively small in comparison with the average size of companies in the USA. For example, the average market capitalization of companies listed on UAE stock exchanges in 2013 was US$1.5bn in comparison with US$5.7bn in the USA (World Bank, 2015).

Big Four international audit firms are more likely to encourage good corporate governance practices and to promote ACs among their clients (Turley and Zaman, 2004). Large international audit firms have more concern for their reputation than small ones, and hence they are usually willing to engage with clients to demonstrate a commitment to sound governance. Moreover, the existence of an effective AC is important to large audit firms because such a governance mechanism protects auditors from unnecessary pressures that may expose them to unethical conduct and hence to preserve auditors' independence (Kirk and Siegel, 1996, Klein, 2002). In this respect, Eichenseher and Shields (1985) found an association between a firm having an AC and having a large independent auditor.

Hutchinson and Gul (2004) suggested that firms in a specific industry might adopt particular corporate governance practices. Therefore, industry type is included as a control variable. The non-financial sectors were broadly classified into four sectors: manufacturing, service, construction and consumer staples. The construction sector is excluded from the model to serve as a benchmark for the included sectors. The construction sector was chosen to serve as a benchmark as it, in comparison to other industries, operates in a high-risk environment (Loosemore *et al.*, 2005). To ensure the effectiveness of the risk management strategies in this risky sector and enhance the investors' confidence in these strategies, this industry is expected to establish active ACs as well as risk management committees (Petrovic-Lazarevic and Djordjevic, 2002). In the UAE context, additionally to its risky environment that requires active governance mechanisms like other countries, the construction sector makes an immense contribution to the economic growth of the country (Alzarooni, 2014). In this respect, Essig and Batran (2005) noticed that most of the investments in the UAE were oriented towards the construction industry.

As for the relationship between profitability and corporate governance quality, profitable companies would give signals to regain the trust of the market through adopting a set of "governance best practices". These profitable companies have incentives to distinguish themselves from less profitable ones by following best practices as such practices enhance firm's ability to raise capital at the lowest possible cost. Some research findings supported this argument and showed profitability positively impacts the adoption of sound corporate governance practices (Black *et al.*, 2006; Silveira *et al.*, 2007).

Data collection and methodology

Data collection

As mentioned earlier, this study only covers non-financial companies listed on the UAE Stock Exchanges during the period 2011-2013. All financial companies (banking and insurance) were excluded because the nature of these companies, their regulatory environment and capital structures are different than non-financial companies. Initially, all the 55 non-financial listed companies were included in the sample. However, seven companies with missing data related to variables used in the study for the duration of the three years were excluded. Thus, the final sample consisted of 48 companies over three years (144 observations). Data on corporate governance variables (both dependent and independent variables) were obtained from sampled companies' corporate governance reports. The listing requirements require all listed companies to publish separate annual corporate governance reports. The reports include details about the board of directors, board committees, external auditor and shareholding structure. Data on total assets, sales, net

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

income and external auditor (control variables) were manually gathered from the annual reports published by sampled listed companies. The annual and corporate governance reports of the listed companies are usually posted for public viewing on companies' websites as well as at the stock markets' websites where these companies are listed. In this study, electronic versions of both annual and corporate governance reports of the respective firms were downloaded from the Abu Dhabi Securities Exchange (ADX) and Dubai Financial Market (DFM) websites.

Drawing upon Smith (2003) used by Zaman and Valentinčič (2011) and Naser *et al.* (2014), this study uses four features of the AC (dependent variable) to measure its effectiveness: audit committee size (ACS), audit committee independence (ACI), audit committee diligence (ACD) and audit committee financial expertise (ACF). Under the assumption that AC features are equally important, an unweighted approach is applied in this study by assigning a dichotomous score for each of the four features of the AC as follows:

- *ACS*: A score of one (1) is assigned to the firm if the board size is >3; 0 score if size ≤ 3;
- *ACI*: A score of one (1) is assigned to the firm if all AC members are independent; 0 score otherwise;
- *ACD*: A score of one (1) is assigned to the firm if the AC held > 4 meetings; 0 score otherwise; and
- *ACF*: A score of one (1) is assigned to the firm if more than one of the AC members has financial expertise; 0 score otherwise.

The audit committee effectiveness of a particular firm (ACE) is measured as the average score of the four indicators of the AC:

$$ACE = (ACS + ACI + ACD + ACF)\ /\ 4$$

The independent variables include a set of corporate governance mechanisms, namely, board size, percentage of independent board members, CEO duality, government ownership, institutional ownership and major shareholders. In addition to these corporate governance and ownership structure variables, four control variables for companies' characteristics that may affect their financial performance are included in the model. These control variables are the corporate size, auditor type, industry type and profitability. Definitions and measurements of the independent and control variables used in the study are described in Table I.

Statistical methods

To investigate the above research hypotheses, the following multiple logistic regression model will be used:

$$\begin{aligned} Logit(\pi_i) = ln\left(\frac{\pi_i}{1-\pi_i}\right) &= \beta_0 + \beta_1 BSIZE + \beta_2 BIND + \beta_3 DUAL \\ &+ \beta_4 INST + \beta_5 GOV + \beta_6 MAJ + \beta_7 AUDT + \beta_8 FSIZE \\ &+ \beta_9 PROF + \beta_{10} MANF + \beta_{11} SERV + \beta_{12} STAP + \varepsilon \end{aligned}$$

where, π_i represents the audit committee effectiveness level of the ith company, β_0 to β_{12} are the model parameters, and ε *is* a random error.

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

Variables	Operationalization	Data source
Board Size (BSIZE)	The total number of board directors of firm	Company corporate governance report
Board Independence (BIND)	Number of independent board members of firm divided by total number of board members	Company corporate governance report
CEO Duality (DUAL)	Dummy, 1 for a duality firm and 0 otherwise	Company corporate governance report
Institutional Ownership (INST)	Percentage of ordinary shares of firm held by institutional investors	Company corporate governance report
Government Ownership (GOV)	Percentage of a firm's ordinary shares held by government	Company corporate governance report
Major Shareholders (MAJ)	Percentage of ordinary shares owned by shareholders having a minimum of 5 per cent of firm	Company corporate governance report
Auditor Type (AUDT)	Dummy variable: (1) score is given to a local firm affiliated to a big international firm; (0) score is given to a local audit firm	Company corporate governance report/ Company annual report
Firm Size (FSIZE)	Natural logarithm of total assets of firm	Company annual report
Profitability (PROF)	Net income to net sales of firm	Company annual report
Manufacturing sector (MANF)	Dummy, 1 if a firm operates in a manufacturing sector and 0 otherwise	Company annual report
Service sector (SERV)	Dummy, 1 if a firm operates in a service sector; 0 otherwise	Company annual report
Consumer Staples sector (STAP)	Dummy, 1 if a firm operates in a consumer staples sector; 0 otherwise	Company annual report

Table I. Independent variables, definitions and sources

Empirical results

ACE index validity and reliability

Although the four indicators constituting the proposed ACE index were most frequently used in empirical research on AC effectiveness, the validity and reliability of this construct have never been investigated. Before examining this issue, it is crucial first to emphasize the formative nature of the ACE construct, rather than the reflective nature, as the four indicators are covering different sides of AC effectiveness. A four-point criterion for determining the nature of constructs has been widely used in organizational research (Diamantopoulos and Winklhofer, 2001; Jarvis *et al.*, 2003; Petter *et al.*, 2007; Hair *et al.*, 2016). This criterion requires examining the indicators for their:

- causal priority with the construct;
- mutual interchangeability;
- joint covariation; and
- nomological net.

First, the four indicators have been used collectively to constitute the construct of AC effectiveness. Analogous to the argument introduced by Peng and Lai (2012) on operational performance, the assumption of the existence of an underlying latent construct of AC effectiveness that induces changes in the AC size, diligence, financial expertise and independence is not plausible. Conceptually, researchers cannot expect that an underlying construct of AC effectiveness causes the four components to all change in the same direction, but on the contrary, the AC effectiveness will be a consequence of the changes in AC size, diligence, financial expertise and independence. Second, the four indicators are not interchangeable; for example, the indicator used to measure the AC financial expertise

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

cannot be used as a proxy for AC independence. Third, it is not necessary that a change in one AC effectiveness indicator will be associated with similar changes in other indicators. For instance, a larger AC is not necessarily associated with more AC meetings. Finally, the considered indicators are not required to have the same antecedents and consequences. For example, the driver for increasing the AC size is not necessary a driver for increasing the number of AC members with financial expertise. At the same time, increasing AC size and AC financial expertise will not necessarily lead to similar results, as they are capturing different aspects of AC effectiveness. Hence, it is important to treat the ACE index as a formative construct and use the relevant measures for assessing its validity and reliability.

It is worth noting that validity assessment is one of the most controversial issues in formative measurement literature where some researchers reject using quantitative measures, while others indicate the applicability of limited statistical procedures (Diamantopoulos *et al.*, 2008). The proposed statistical procedures cover individual indicator validity (Diamantopoulos and Winklhofer, 2001) and construct validity (Jarvis *et al.*, 2003; MacKenzie *et al.*, 2005; Diamantopoulos and Siguaw, 2006; Diamantopoulos, 2006; Edwards, 2001). However, these procedures are used to examine the construct validity of formative constructs only in models including reflective constructs besides the formative ones using partial least squares (PLS) methods. In such models, the formative construct serves as an antecedent for other formative or reflective constructs. Hence, in our model, the aforementioned techniques are inapplicable, as the ACE index serves as a dependent variable only.

Although examining construct validity is not possible in our model, nevertheless, we can examine the content validity of the ACE index. Petter *et al.* (2007) indicated that content validity is particularly important for formative constructs, and testing it should be a mandatory practice for assessing formative constructs. Furthermore, Petter *et al.* (2007) recommended examining content validity using a thorough literature review related to the conceptual domain of the construct. As presented earlier, the four indicators forming the ACE index have been frequently used collectively in measuring the AC effectiveness (Lin *et al.*, 2006; Pucheta-Martínez and De Fuentes, 2007; O'Sullivan *et al.*, 2008; Aldamen *et al.*, 2012; de Andrés Suárez *et al.*, 2013; Abdel-Meguid *et al.*, 2014; Bin-Ghanem and Ariff, 2016; Wan Mohammad *et al.*, 2016). This high consensus on the use of these constituent indicators testifies to the content validity of the ACE index.

Unlike the indicators in reflective constructs, the high correlations among the constituent indicators, and hence the high internal consistency, of formative constructs are undesirable (Jarvis *et al.*, 2003; Diamantopoulos *et al.*, 2008; Peng and Lai, 2012). This means that multicollinearity poses more of a problem in formative measures (Peng and Lai, 2012). Hence, to examine the reliability of formative constructs, it is common to ensure that the variance inflation factor (VIF) values of the formative measures are below 3.3 (Diamantopoulos and Siguaw, 2006). For the ACE index, the VIF values of ACS, ACI, ACF and ACM were 1.23, 1.05, 1.03 and 1.20, respectively. All the VIF values are less than 3.3 indicating that multicollinearity does not represent a problem to the reliability of the ACE index.

Descriptive statistics and correlation analysis

Table II presents the average score of the individual ACE components over the period 2011-2013. It can be deduced from the table that there has been a drastic increase of 15 per cent in the AC diligence (from 33 to 48 per cent) and inclusion of financial expertise (from 8 to 23 per cent) from 2011 to 2012. This suggests that only two of the AC attributes (AC diligence and AC financial expertise) have become more active over our three-year study period. This is

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

due to the fact that corporate governance just became effective and more companies started to publish their governance report. By 2012, most of the companies had already published their governance report in compliance with the governance codes. Hence, little changes occurred in the number of companies publishing their governance report in 2013, as almost all of them published their report this year or the year before. However, no remarkable changes occurred on other components of AC. Around one-quarter of the companies have ACs composed of at least four members, while these committees are fully composed of independent members in more than a half of the companies.

Table III provides descriptive statistics of the ACE Index and the independent variables during the period between 2011 and 2013. The results indicate a remarkable improvement in the AC effectiveness of the listed companies from the year 2011 to 2013. This is attributed to the increase in the diligence and financial expertise components of the ACE index as discussed earlier. Over the three-year period, there were no notable changes in the independent variables except CEO duality and profitability. The percentage of companies with CEO duality has jumped from 12.5 per cent in 2011 to 20.8 per cent in 2012 but has dropped to 16.7 per cent in 2013. Moreover, the profitability witnessed around 50 per cent drop from 0.072 in 2012 to 0.037 in 2013.

The correlation matrix for the ACE index and the nine independent variables is reported in Table IV. The results indicate that companies with larger board size, more independent board and a big four external auditor tend to have a more effective AC. Moreover, as the shares of institutional investors and major shareholders increase, the AC is expected to be less effective. On the other hand, the results showed weak to moderate correlations amongst the independent variables (r ranged from −0.464 to 0.368), indicating no signs of multicollinearity.

Logistic regression analysis

Due to the panel data context, the random effect logistic model was first fit to model the probability of AC effectiveness. Based on the likelihood-ratio test, the intra-class correlation coefficient (6.42×10^{-8}) for the model was insignificant ($\chi^2 \approx 0$, P-value ≈ 1). Moreover, the estimates under the random-effect model and the pooled model are largely identical. This indicates that there is no need to include the panel-level variation component in the model and supports the preference of the pooled logistic model over the random-effect logistic model.

Table V presents the results of the logistic model of the AC effectiveness index. Based on the likelihood ratio test, the logistic model is highly significant ($\chi^2 = 70.04$, P-value = 0.000) and successfully explained around 48 per cent of the variation in the AC effectiveness index.

Moreover, the Hosmer – Lemeshow test indicates a satisfactory model fit (χ^2 = 6.19, P-value = 0.4018). With regard to individual predictors, the regression results indicated that board independence, institutional ownership, major shareholders, firm size, manufacturing and service sectors are significantly related to the effectiveness of the AC at the 5 per cent

Year	AC size	AC independence	AC diligence	AC financial expertise
2011	0.27	0.56	0.33	0.08
2012	0.25	0.56	0.48	0.23
2013	0.27	0.50	0.46	0.25
Pooled	0.26	0.54	0.42	0.19

Table II. Descriptive statistics for the ACE components

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

Variable	Year	n	Mean	SD	Minimum	Maximum
ACE	2011	48	0.313	0.250	0	1
	2012	48	0.380	0.231	0	0.75
	2013	48	0.370	0.263	0	1
	Pooled	144	0.354	0.248	0	1
BDSIZE	2011	48	7.813	2.120	5	17
	2012	48	7.938	2.273	5	18
	2013	48	8.000	2.212	5	17
	Pooled	144	7.917	2.189	5	18
BIND	2011	48	0.692	0.202	0.333	1
	2012	48	0.704	0.206	0.333	1
	2013	48	0.710	0.201	0.333	1
	Pooled	144	0.702	0.201	0.333	1
DUAL	2011	48	0.125	0.334	0	1
	2012	48	0.208	0.410	0	1
	2013	48	0.167	0.377	0	1
	Pooled	144	0.167	0.374	0	1
GOVRN	2011	48	0.124	0.195	0	0.725
	2012	48	0.135	0.195	0	0.726
	2013	48	0.142	0.200	0	0.726
	Pooled	144	0.134	0.195	0	0.726
INSTIT	2011	48	0.384	0.268	0	0.942
	2012	48	0.404	0.256	0	0.940
	2013	48	0.382	0.260	0	0.940
	Pooled	144	0.390	0.260	0	0.942
MAJ	2011	48	0.502	0.243	0	0.930
	2012	48	0.508	0.240	0	0.931
	2013	48	0.498	0.250	0	1
	Pooled	144	0.503	0.243	0	1
AUDT	2011	48	0.833	0.377	0	1
	2012	48	0.813	0.394	0	1
	2013	48	0.792	0.410	0	1
	Pooled	144	0.813	0.392	0	1
FSIZE	2011	48	21.639	1.646	17.843	25.466
	2012	48	21.654	1.646	17.857	25.532
	2013	48	21.589	1.988	14.931	25.527
	Pooled	144	21.627	1.755	14.931	25.532
PROF	2011	48	0.071	0.166	−0.540	0.380
	2012	48	0.072	0.191	−0.730	0.460
	2013	48	0.037	1.071	−6.790	1.990
	Pooled	144	0.060	0.631	−6.790	1.990

Table III.
Descriptive statistics for dependent and independent variables 2011-2013

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

level, while a significant effect of each of board size and CEO duality has been observed at the 10 per cent level.

The board independence (BIND) seems to be a major determinant of AC effectiveness. A positive and highly significant association has been reported between BIND and the AC effectiveness. This result suggests that companies with boards having higher percentage of independent directors are more likely to have effective ACs. This finding is not surprising as many previous studies documented that boards with more independent directors are more effective in performing their monitoring function and are more likely to alleviate any conflict of interest between investors and managers and work for the shareholders' interest (Peasnell *et al.*, 2005; Mather and Ramsay, 2006; García-Meca and Sánchez-Ballesta, 2009). A positive

Variable	ACE	BDSIZE	BIND	DUAL	AUDT	GOVRN	INSTIT	MAJ	FSIZE	PROF
ACE	1.000									
BDSIZE	0.422**	1.000								
BIND	0.440**	0.124	1.000							
DUAL	−0.113	−0.077	−0.223**	1.000						
AUDT	0.292**	0.129	0.018	−0.024	1.000					
GOVRN	0.144	0.035	0.207*	−0.042	0.124	1.000				
INSTIT	−0.263**	0.064	−0.130	−0.011	−0.129	−0.464**	1.000			
MAJ	−0.336**	−0.303**	−0.049	0.218**	−0.251**	0.203*	0.211*	1.000		
FSIZE	0.434**	0.331**	0.127	−0.004	0.368**	0.220**	0.002	−0.288**	1.000	
PROF	−0.137	−0.035	−0.064	0.053	−0.010	0.046	0.037	0.086	0.063	1.000

Notes: *Correlation is significant at the 0.05 level; ** Correlation is significant at the 0.01 level

Table IV. Pearson correlation coefficients

Variable	B	z	P-value
Regression coefficients			
Constant	−21.046	−2.59	0.010
BSIZE	0.386	1.75	0.081
BIND	10.091	3.95	0.000
DUAL	−1.688	−1.81	0.070
GOVRN	−2.947	−1.32	0.185
INSTIT	−5.842	−3.53	0.000
MAJ	5.627	2.17	0.030
AUDITOR	−0.041	−0.05	0.958
SIZE	0.756	2.62	0.009
PROF	0.271	0.55	0.580
MANF	−3.280	−2.17	0.030
STAP	−0.811	−0.44	0.657
SERV	−2.857	−2.11	0.035
Model diagnostics			
Likelihood ratio test		$\chi^2 = 70.04$, P-value = 0.0000	
Hosmer–Lemeshow test		$\chi^2 = 6.19$, P-value = 0.4018	
Pseudo R^2		0.4841	

Table V. Pooled logistic regression model with *ACE* as a dependent variable

and marginally significant (at a 10 per cent significance level) association has been reported between board size (BSIZE) and AC effectiveness. This result supports some earlier findings that showed a significant and positive association between board size and the voluntary formation/effectiveness of the AC (Piot, 2004; Firth *et al.*, 2007; Benzing *et al.*, 2011; Abdel-Meguid *et al.*, 2014). On the other hand, a marginally significantly (at a 10 per cent level) negative association has been reported between CEO duality and AC effectiveness suggesting that the dual role of CEO and board chair would reduce the effectiveness of the AC. This result is consistent with prior studies in other countries (Davidson III *et al.*, 2004; Chen *et al.*, 2009; Abdel-Meguid *et al.*, 2014). This finding may be explained by the fact that a large board could be more effective as it can be drawn from a wider range of talented, experienced independent directors and can delegate duties more efficiently among board members. This, in turn, will enable AC members to devote sufficient time and effort to their responsibilities on the committee. This result provides support for the complementary

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

theory (Hoskisson *et al.*, 2009; Schepker and Oh, 2013) suggesting that one governance mechanism could improve the effectiveness of another mechanism. According to this theory, one governance mechanism (AC) becomes more effective through "mutual enhancement" when it is combined with another effective governance mechanism (board of directors) (Aguilera *et al.*, 2008). Therefore, it is appropriate to suggest that ACs in the Emirati context are more likely to be effective when complemented with a well-functioning board characterized by a large size, a high level of board independence and non-CEO duality leadership style.

As for the ownership structure variables, Table V indicates that institutional ownership (INSTIT) is negatively and significantly correlated with AC effectiveness. Those investors usually use their high level of influence on companies through their board representatives to extract private benefits unavailable to minority shareholders. As such, they have little incentives to have effective ACs, as the information asymmetry and conflict of interest between management and such controlling shareholders can be resolved through direct contact and by using their influential position within the company. Instead, companies with high levels of institutional ownership are more prone to severe PP conflict of interest between those controlling shareholders and minority investors. This finding is in line with Hassan and Hijazi (2015), who found negative and marginally significant association between institutional ownership and the formation of an AC in Palestine. However, this finding is contrary to Pucheta-Martínez and De Fuentes (2007) who found that institutional investors have more influence than individual investors in the formation of ACs in Spain. This finding suggests that institutional investors may act as a substitute mechanism to the alternative corporate governance reforms such as AC. A negative association between government ownership (GOV) and AC effectiveness was also observed, although it was statistically insignificant. However, a positive association was found between large shareholders who own at least 5 per cent of a corporation's issued shares (MAJ) and ACE. This finding can be explained on the grounds that the percentage of shares holding by every individual investor in the Emirati listed companies is not high enough to constitute a "block". Therefore, no large shareholders can extract private benefits and thus they are more likely to cooperate with other shareholders to monitor management.

This finding is consistent with the substitution theory, suggesting that governance mechanisms "effectively substitute for one another and/or operate in concert" (Dalton *et al.*, 2003). According to this theory, the marginal effects of one governance mechanism (AC) on organizational outcomes may be reduced by the existence of another potentially effective corporate governance mechanism (institutional ownership) (Rediker and Seth, 1995; Ward *et al.*, 2009).

Turning to the control variables, Table V shows that the AC effectiveness is positively related to each of the firm size (SIZE), profitability (PROF) and auditor type (AUDITOR). However, only the firm size variable is found to be statistically significant. This finding is consistent with prior literature (Firth *et al.*, 2007; Raghunandan and Rama, 2007) that found a positive association between firm size and audit committee effectiveness. Large companies are more complex to audit than smaller ones and, therefore, need to have active ACs to deal with accounting issues.

To examine the robustness of the main results, additional tests were conducted. First, we added leverage and audit fees as control variables in the model. Highly leveraged firms are more likely to provide signals to existing and potential debt holders and creditors that they pay more attention to good corporate governance practices such as formation of active ACs. High audit fees are associated with audit quality, as more audit time and effort are spent by auditors doing their jobs. To assure investors, creditors and other stakeholders about the

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

credibility of their accounting information, firms with sound corporate governance structure (including an effective AC) are more likely to engage with highly paid external auditors providing high-quality services. We also used the number of shareholders who own 5 per cent or more of outstanding shares instead of the percentage of such shareholders. To control for unobserved factors that may affect all companies over the year, we include year fixed effects. Additionally, we used a probit model to check the robustness of the logit model. Generally, the results of these investigations were largely consistent with those presented in Table V. It is worth noting that, based on our earlier discussion on the selection of independent variables, the ACE model is well-specified in terms of appropriateness and sufficiency of variables included in the model. This ensures the nonexistence of endogenous predictors in the model.

Conclusion

While some of the previous literature supported the complementarily view of the relationship between corporate governance devices on the presence and/or effectiveness of an AC, other studies have supported the substitution hypothesis. In this study, we examine whether AC serves as a substitute or a complement mechanism to other corporate governance reforms among non-financial companies listed on UAE Stock Markets during the period 2011-2013. Data were collected from the annual reports and corporate governance reports of all non-financial companies listed on the two exchanges for the years 2011-2013.

The effectiveness of the AC is measured by constructing an index comprising four features of the AC: audit committee size (ACS), audit committee independence (ACI), audit committee diligence (ACD) and audit committee financial expertise (ACF). Logistic regression analysis was conducted to analyze the relationship between ACE and a set of corporate governance mechanisms, namely, board size, percentage of independent board members, CEO duality, government ownership, institutional ownership and major shareholders.

The result of the analysis documents three main conclusions. First, different corporate governance mechanisms, including ownership structure, are interrelated in an emerging economy such as UAE characterized by highly concentrated ownership and weak investor protection. Substitution and/or complementary effects of the different governance mechanisms exist. Second, board characteristics (measured by size, independence and CEO-duality) appear to serve as a complement to AC effectiveness. Companies with larger boards and higher level of board independence are more likely to have effective ACs. This indicates that the corporate board and its committees, including the AC, constitute a key mechanism of alleviating the agency problem between managers and shareholders. Third, ownership concentration, represented by the institutional investors, substitutes for audit committee effectiveness. This suggests that those controlling investors use their power and influence to substitute for the effective ACs in controlling agency problems with companies' managements.

The importance of the current study stems from the fact that it provides valuable insights into the interaction between various corporate governance mechanisms in the UAE. The findings may help regulators to introduce any changes deemed necessary to promote good corporate governance practices in the country.

This study is not without limitations. As the study uses UAE data, the study findings should be generalized cautiously to stock markets in other countries that have different regulations and economic characteristics. Furthermore, the study examines the influence of a certain set of corporate governance factors on the effectiveness of AC. However, other

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

corporate governance mechanisms may contribute to the effectiveness of AC. Another major limitation of the current study is the relatively small sample. The small sample size is inevitable because of the limited number of UAE listed firms. The current findings should, therefore, be treated with the utmost caution.

As corporate governance is still at its infancy stage in the UAE, this paper presents a preliminary evidence on the AC effectiveness and the interaction between AC and other corporate governance mechanisms. Future research in the UAE context is therefore needed to validate our findings.

Note

1. According to the world development indicators published by the World Bank in 2015, Saudi Arabia GDP was US$646bn, UAE $370.3bn and Egypt $331bn.

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

References

Abbott, L.J., Parker, S. and Peters, G.F. (2004), "Audit committee characteristics and restatements", *Auditing: A Journal of Practice & Theory*, Vol. 23 No. 1, pp. 69-87.

Abdel-Meguid, A., Samaha, K. and Dahawy, K. (2014), "Preliminary evidence on the relationship between corporate governance attributes and audit committee functionality in Egypt: beyond checking the box", *Corporate Governance*, Vol. 14 No. 2, pp. 197-210.

Acharya, V.V., Myers, S.C. and Rajan, R.G. (2011), "The internal governance of firms", *The Journal of Finance*, Vol. 66 No. 3, pp. 689-720.

Aguilera, R.V. and Crespi-Cladera, R. (2012), "Firm family firms: current debates of corporate governance in family firms", *Journal of Family Business Strategy*, Vol. 3 No. 2, pp. 66-69.

Aguilera, R.V., Filatotchev, I., Gospel, H. and Jackson, G. (2008), "An organizational approach to comparative corporate governance: costs, contingencies, and complementarities", *Organization Science*, Vol. 19 No. 3, pp. 475-492.

Akhtaruddin, M., Hossain, M.A., Hossain, M. and Yao, L. (2009), "Corporate governance and voluntary disclosure in corporate annual reports of Malaysian listed firm", *Journal of Applied Management Accounting Research*, Vol. 7 No. 1, pp. 1-19.

Al-Baidhani, A.M. (2014), "Review of corporate governance bundle", *Corporate Ownership and Control*, Vol. 11 No. 4, pp. 236-241.

Aldamen, H., Duncan, K., Kelly, S., McNamara, R. and Nagel, S. (2012), "Audit committee characteristics and firm performance during the global financial crisis", *Accounting and Finance*, Vol. 52 No. 4, pp. 971-1000.

Al-Najjar, B. (2011), "The determinants of audit committee independence and activity: evidence from the UK", *International Journal of Auditing*, Vol. 15 No. 2, pp. 191-203.

Alzarooni, K. (2014), "The Challenges of Corporate Governance Systems for Construction Project Management", Master Thesis, The British University in Dubai, Dubai.

Anderson, R.C. and Reeb, D.M. (2003), "Founding family ownership and the agency cost of debt", *Journal of Financial Economics*, Vol. 66 No. 3, pp. 263-285.

Andres, P., Azofra, V. and Lopez, F.J. (2005), "Corporate boards in OECD countries: size composition, compensation, functioning and effectiveness", *Corporate Governance: An International Review*, Vol. 13, pp. 197-210.

Aoki, M. (2002), "Toward a comparative institutional analysis", *Journal of Institutional and Theoretical Economics*, Vol. 158 No. 4, pp. 735-737.

Baydoun, N., Maguire, W., Ryan, N. and Willett, R. (2013), "Corporate governance in five Arabian countries", *Managerial Auditing Journal*, Vol. 28 No. 1, pp. 7-22.

Bedard, J., Chtourou, S.M. and Courteau, L. (2004), "The effect of audit committee expertise, independence, and activity on aggressive earnings management", *Auditing: A Journal of Practice & Theory* Vol. 23 No. 2, pp. 13-35.

Belkhir, M. (2009), "Board of directors' size and performance in the banking industry", *International Journal of Managerial Finance*, Vol. 5 No. 2, pp. 201-221.

Benzing, C., Leach, E. and McGee, C. (2011), "Sarbanes-Oxley and the new form 990", *Nonprofit and Voluntary Sector Quarterly*, Vol. 40 No. 6, pp. 1132 -1147.

Bin-Ghanem, H. and Ariff, A.M. (2016), "The effect of board of directors and audit committee effectiveness on internet financial reporting: evidence from gulf co-operation council countries", *Journal of Accounting in Emerging Economies*, Vol. 6 No. 4, pp. 429-448.

Black, B.S., Jang, H. and Kim, W. (2006), "Predicting firms' corporate governance choices: evidence from Korea", *Journal of Corporate Finance*, Vol. 12 No. 3, pp. 660-691.

Boone, A.L., Field, L.C., Karpoff, J.M. and Raheja, C.G. (2007), "The determinants of corporate board size and composition: an empirical analysis", *Journal of Financial Economics*, Vol. 85 No. 1, pp. 66-101.

Bradbury, M.E. (1990), "The incentives for voluntary audit committee formation", *Journal of Accounting and Public Policy*, Vol. 9 No. 1, pp. 19-36.

Bushman, R., Chen, Q., Engel, E. and Smith, A. (2004), "Financial accounting information, organizational complexity and corporate governance system", *Journal of Accounting and Economics*, Vol. 37 No. 2, pp. 167-201.

Cassiman, B. and Veugelers, R. (2006), "In search of complementarity in innovation strategy: internal R&D and external knowledge acquisition", *Management Science*, Vol. 52 No. 1, pp. 68-82.

Chau, G. and Gray, S.J. (2010), "Family ownership, board independence and voluntary disclosure: evidence from Hong Kong", *Journal of International Accounting, Auditing and Taxation*, Vol. 19 No. 2, pp. 93-109.

Chen, G.M., Firth, L. and Xu, (2009), "Does the type of ownership control matter? Evidence from China's listed companies", *Journal of Banking & Finance*, Vol. 33 No. 1, pp. 171-181.

Cheng, S. (2008), "Board size and variability of corporate performance", *Journal of Financial Economics*, Vol. 87 No. 2, pp. 157-176.

Claessens, S., Djankov, S. and Lang, L.H. (2000), "The separation of ownership and control in East Asian corporations", *Journal of Financial Economics*, Vol. 58 No. 1, pp. 81-112.

Cremers, K. and Nair, V.B. (2005), "Governance mechanisms and equity prices", *The Journal of Finance*, Vol. 60 No. 6, pp. 2859-2894.

Dalton, D.R., Daily, C.M., Certo, S.T. and Roengpitya, R. (2003), "Meta-analyses of financial performance and equity: fusion or confusion?", *Academy of Management Journal*, Vol. 46 No. 1, pp. 13-26.

Davis, J.H., Schoorman, F.D. and Donaldson, L. (1997), "Toward a stewardship theory of management", *Academy of Management Review*, Vol. 2 No. 1, pp. 20-47.

Davidson III, W.N., Xie, B. and Xu, W. (2004), "Market reaction to voluntary announcements of audit committee appointments: the effect of financial expertise", *Journal of Accounting and Public Policy*, Vol. 23 No. 4, pp. 279.

DeFond, M.L. and Francis, J.R. (2005), "Audit research after Sarbanes-Oxley", *Auditing: A Journal of Practice & Theory*, Vol. 24 No. 1, pp. 5-30.

de Andrés Suárez, J., García, E.C., Méndez, C.F. and Gutiérrez, C.R. (2013), "The effectiveness of the audit committee in Spain: implications of its existence on the auditor's opinion", *SERIEs*, Vol. 4 No. 3, pp. 333-352.

DeZoort, F.T. and Salterio, S.E. (2001), "The effects of corporate governance experience and financial-reporting and audit knowledge on audit committee members' judgments", *Auditing: A Journal of Practice & Theory*, Vol. 20 No. 2, pp. 31-47.

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

Diamantopoulos, A. (2006), "The error term in formative measurement models: interpretation and modeling implications", *Journal of Modelling in Management*, Vol. 1 No. 1, pp. 7-17.

Diamantopoulos, A., Riefler, P. and Roth, K.P. (2008), "Advancing formative measurement models", *Journal of Business Research*, Vol. 61 No. 12, pp. 1203-1218.

Diamantopoulos, A. and Siguaw, J.A. (2006), "Formative versus reflective indicators in organizational measure development: a comparison and empirical illustration", *British Journal of Management*, Vol. 17 No. 4, pp. 263-282.

Diamantopoulos, A. and Winklhofer, H.M. (2001), "Index construction with formative indicators: an alternative to scale development", *Journal of Marketing Research*, Vol. 38 No. 2, pp. 269-277.

Donaldson, L. and Davis, J.H. (1991), "Stewardship theory or agency theory: CEO governance and shareholder returns", *Australian Journal of Management*, Vol. 16 No. 1, pp. 49-64.

Edwards, J.R. (2001), "Multidimensional constructs in organizational behavior research: an integrative analytical framework", *Organizational Research Methods*, Vol. 4 No. 2, pp. 144-192.

Eichenseher, J.W. and Shields, D. (1985), "Corporate director liability and monitoring preferences", *Journal of Accounting and Public Policy*, Vol. 4 No. 1, pp. 13-31.

Essig, M. and Batran, A. (2005), "Public–private partnership: development of long-term relationships in public procurement in Germany", *Journal of Purchasing and Supply Management*, Vol. 11 No. 56, pp. 221-231.

Faccio, M., Lng, L.H.P. and Young, I. (2001), "Dividned and expropriatation", *American Economic Review*, Vol. 91 No. 1, pp. 54-78.

Fama, E.F. and Jensen, M.C. (1983), "Separation of ownership and control", *Journal of Law and Economics*, Vol. 26 No. 2, pp. 301-325.

Feldmann, D.A. and Schwarzkopf, D.L. (2003), "The effect of institutional ownership on board and audit committee composition", *Review of Accounting and Finance*, Vol. 2 No. 4, pp. 87-109.

Felo, A.J., Krishnamurthy, S. and S.A. and Solieri, (2003), "Audit committee characteristics and the perceived quality of financial reporting: an empirical analysis", Working Paper, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=401240 (accessed 6 April 2017).

Fernández, C. and Arrondo, R. (2005), "Alternative internal controls as substitutes of the board of directors", *Corporate Governance: An International Review*, Vol. 13 No. 6, pp. 856-866.

Filatotchev, I., Kapelyushinkov, R., Dymonia, N. and Aukutsionek, S. (2001), "The effect of ownership concentration on investment and performance in privatized firms in Russia", *Managerial and Decision Economics*, Vol. 22 No. 6, pp. 299-313.

Firth, M., Fung, P.M. and Rui, O.M. (2007), "Ownership, two-tier board structure, and the informativeness of earnings–evidence from China", *Journal of Accounting and Public Policy*, Vol. 26 No. 4, pp. 463-496.

García-Meca, E., Sánchez, J.P and Ballesta, S. (2009), "Corporate governance and earnings management: a meta-analysis", *Corporate Governance: An International Review*, Vol. 17 No. 5, pp. 594-610.

Greco, G. (2011), "Determinants of board and audit committee meeting frequency: evidence from Italian companies", *Managerial Auditing Journal*, Vol. 6 No. 3, pp. 208-229.

Gillan, S., Hartzell, J.C. and and Starks, L.T. (2006), "Evidence on corporate governance: the joint determination of board structures and charter provisions", AFA 2007 Chicago Meetings Paper, available at: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=891402 (accessed 4 April 2017).

Giroud, X. and Mueller, H.M. (2011), "Corporate governance, product market competition, and equity prices", *Journal of Finance*, Vol. 66 No. 2, pp. 563-600.

Guest, P.M. (2009), "The impact of board size on firm performance: evidence from the UK", *The European Journal of Finance*, Vol. 15 No. 4, pp. 385-404.

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

Habib, A. and Hossain, M. (2012), "CEO/CFO characteristics and financial reporting quality: a review", *Research in Accounting Regulation*, Vol. 25 No. 1, pp. 88-100.

Hair, J.F., Jr, Hult, G.T.M., Ringle, C. and Sarstedt, M. (2016), *A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM)*, Sage Publications.

Hassan, M.K. (2015), "Corporate governance, audit committee and the internet reporting of strategic information by UAE non-financial listed firms", *Journal of Accounting and Management Information Systems*, Vol. 14 No. 3, pp. 508-545.

Hassan, Y.M. and Hijazi, R.H. (2015), "Determinants of the voluntary formation of a company audit committee: evidence from Palestine", *Asian Academy of Management Journal of Accounting and Finance*, Vol. 11 No. 1, pp. 27-46.

Henry, D. (2004), "Corporate governance and ownership structure of target companies and the outcome of takeovers", *Pacific-Basin Finance Journal*, Vol. 12 No. 4, pp. 419-444.

Hoskisson, R.E., Castleton, M.W. and Withers, M.C. (2009), "Complementarity in monitoring and bonding: more intense monitoring leads to higher executive compensation", *Academy of Management Perspectives*, Vol. 23 No. 2, pp. 57-74.

Hussainey, K. and Aljifri, K. (2012), "Corporate governance mechanisms and capital structure in UAE", *Journal of Applied Accounting Research*, Vol. 13 No. 2, pp. 145-160.

Hussainey, K. and Wang, M. (2010), "Voluntary disclosure and corporate governance: further UK evidence", Working paper, Stirling University.

Hutchinson, M. and Gul, F.A. (2004), "Investment opportunity set, corporate governance practices and firm performance", *Journal of Corporate Finance*, Vol. 10 No. 4, pp. 595-614.

Ivashkovskaya, I. and Stepanova, A. (2011), "Does strategic corporate performance depend on corporate financial architecture? Empirical study of European, Russian and other emerging market's firms", *Journal of Management & Governance*, Vol. 15 No. 4, pp. 603-616.

Jarvis, C.B., MacKenzie, S.B. and Podsakoff, P.M. (2003), "A critical review of construct indicators and measurement model misspecification in marketing and consumer research", *Journal of Consumer Research*, Vol. 30 No. 2, pp. 199-218.

Jensen, M.C. (1993), "The modern industrial revolution, exit, and the failure of internal control systems", *The Journal of Finance*, Vol. 48 No. 3, pp. 831-880.

Jensen, M.C. and Meckling, W.H. (1976), "Theory of the firm: managerial behavior, agency costs and ownership structure", *Journal of Financial Economics*, Vol. 3 No. 4, pp. 350-360.

Kirk, D.J. and Siegel, A. (1996), "How directors and auditors can improve corporate governance", *Journal of Accountancy*, Vol. 181 No. 1, pp. 103-111.

Klein, A. (2002), "Audit committee, board of director characteristics, and earnings management", *Journal of Accounting and Economics*, Vol. 33 No. 3, pp. 375-400.

Krishnan, J. (2005), "Audit committee quality and internal control: an empirical analysis", *The Accounting Review*, Vol. 80 No. 2, pp. 649-675.

Kyereboah-Coleman, A. (2007), "Corporate governance and shareholder value maximization: an African perspective", *African Development Review*, Vol. 19 No. 2, pp. 350-367.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and Vishny, R. (1998), "Law and finance", *Journal of Political Economy*, Vol. 106, pp. 1113-1150.

Lam, W. (2000), "The development and significance of corporate audit committees", *The CA Magazine*, pp. 3-40.

Lin, C.P. and Chuang, C.M. (2011), "Principal-principal conflicts and IPO pricing in an emerging economy", *Corporate Governance: An International Review*, Vol. 19 No. 6, pp. 585-600.

Lin, J.W., Li, J.F. and Yang, J.S. (2006), "The effect of audit committee performance on earnings quality", *Managerial Auditing Journal*, Vol. 21 No. 9, pp. 921-933.

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

Lins, K.V. (2003), "Equity ownership and firm value in emerging markets", *Journal of Financial and and Quantitative Analysis*, Vol. 38 No. 1, pp. 159-184.

Loosemore, M., Raftery, J., Reilly, C. and Higgon, D. (2005), *Risk Management in Projects*, 2nd ed., Spon Press, London.

McKnight, P.J. and Mira, S. (2003), "Corporate governance mechanism, agency costs and firm performance in UK firms", available at: http://ssrn.com/abstract=460300

McMullen, D.A. and Raghunandan, K. (1996), "Enhancing audit committee effectiveness", *Journal of Accountancy*, Vol. 182 No. 2, pp. 79-81.

MacKenzie, S.B., Podsakoff, P.M. and Jarvis, C.B. (2005), "The problem of measurement model misspecification in behavioral and organizational research and some recommended solutions", *Journal of Applied Psychology*, Vol. 90 No. 4, pp. 710.

Mather, P. and Ramsay, A. (2006), "The effects of board characteristics on earnings management around Australian CEO changes", *Accounting Research Journal*, Vol. 19 No. 2, pp. 78-93.

Mitton, T. (2002), "A cross-firm analysis of the impact of corporate governance on the East Asian financial crisis", *Journal of Financial Economics*, Vol. 64 No. 2, pp. 215-241.

Mohid Rahmat, M., Mohd Iskandar, T. and Mohd Saleh, N. (2009), "Audit committee characteristics in financially distressed and non-distressed companies", *Managerial Auditing Journal*, Vol. 24 No. 7, pp. 24-638.

Monks, R.G. and Minow, N.M. (2004), *Corporate Governance*, Blackwell Publishing.

Naser, A.A.K., Al-Mutairi, A. and Rana Nuseibeh, K. (2014), "Can substitution and signaling theories explain the relationship between external audit fees and the effectiveness of internal corporate governance?", *Global Journal of Management and Business Research*, Vol. 13 No. 5, pp. 41-49.

Nelson, S.P. and Devi, S. (2013), "Audit committee experts and earnings quality", *Corporate Governance*, Vol. 13 No. 4, pp. 335-351.

Obay, L.A. (2009), "Corporate governance and business ethics: a Dubai-based survey", *Journal of Legal, Ethical and Regulatory Issues*, Vol. 12 No. 2, pp. 29-47.

OECD (2005), "Advancing the corporate governance agenda in the Middle East and North Africa: a survey of legal and institutional frameworks" Working Group 5, Task Force on Corporate Governance of Banks, Organization for Economic Co-Operation and Development, Paris.

O'Sullivan, M., Percy, M. and Stewart, J. (2008), "Australian evidence on corporate governance attributes and their association with forward-looking information in the annual report", *Journal of Management and Governance*, Vol. 12 No. 1, pp. 5-35.

Pearce, J.A. and Zahra, S.A. (1992), "Board composition from a strategic contingency perspective", *Journal of Management Studies*, Vol. 29 No. 4, pp. 411-438.

Peasnell, K.V., Pope, P.F. and Young, S. (2005), "Board monitoring and earnings management: do outside directors influence abnormal accrual", *Journal of Business Finance & Accounting*, Vol. 32 Nos 7/8, pp. 1311-1346. Nos

Peng, M.W. (2009), *Global Business*, South-Western Cengage Learning, Cincinnati.

Peng, D.X. and Lai, F. (2012), "Using partial least squares in operations management research: a practical guideline and summary of past research", *Journal of Operations Management*, Vol. 30 No. 6, pp. 467-480.

Petrovic-Lazarevic, S. and Djordjevic, Z. (2002), "Influence of social protection programs on senior management styles in the Serbian building and construction industry", *Proceedings Management in New Environment, The Faculty of Organizational Sciences*, *Belgrade*, pp. 571-576.

Petter, S., Straub, D. and Rai, A. (2007), "Specifying formative constructs in information systems research", *MIS Quarterly*, Vol. 31 No. 4, pp. 623-656.

Piot, C. (2004), "The existence and independence of audit committees in France", *Accounting and Business Research*, Vol. 34 No. 3, pp. 223-246.

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

Prentice, R.A. and Spence, D.P. (2007), "Sarbanes-Oxley as quake corporate governance: how wise is the received wisdom?", *Georgetown Law Journal*, Vol. 95, pp. 1843-1909.

Pucheta-Martínez, M.C. and De Fuentes, C. (2007), "The impact of audit committee characteristics on the enhancement of the quality of financial reporting: an empirical study in the Spanish context", *Corporate Governance: An International Review*, Vol. 15 No. 6, pp. 1394-1412.

Raghunandan, K. and Rama, D.V. (2007), "Determinants of audit committee diligence", *Accounting Horizons*, Vol. 21 No. 3, pp. 265-279.

Raghunandan, K., Rama, D.V. and Read, W.J. (2001), "Audit committee composition, 'gray directors,' and interaction with internal auditing", *Accounting Horizons*, Vol. 15 No. 2, pp. 105-118.

Rediker, K.J. and Seth, A. (1995), "Board of directors and substitution effects of alternative governance mechanisms", *Strategic Management Journal*, Vol. 16 No. 2, pp. 85--99.

Rogers, P., Dami, A.B.T., Ribeiro, K.C.S. and Sousa, A.F. (2008), "Corporate governance and ownership structure in Brazil: causes and sequences", *Journal of Corporate Ownership and Control*, Vol. 5 No. 2, pp. 36-54.

Saleh, N., Iskandar, T. and Rahmat, M. (2007), "Audit committee characteristics and earnings management: evidence from Malaysia", *Asian Review of Accounting*, Vol. 15 No. 2, pp. 147-163.

Schepker, D.J. and Oh, W.Y. (2013), "Complementary or substitutive effects? Corporate governance mechanisms and poison pill repeal", *Journal of Management*, Vol. 39 No. 7, pp. 1729-1759.

Schleifer, A. and Vishny, R. (1986), "Large shareholders and corporate control", *Journal of Political Economy*, Vol. 94 No. 3, pp. 461-488.

Silveira, A.D.M. Leal, R.P. Carvalhal Da Silva, A. and Barros, L.A.B.D.C. (2007), "Evolution and determinants of firm-level corporate governance quality in Brazil", available at SSRN http://ssrn.com/abstract=995764

Shehata, N. (2015), "Development of corporate governance codes in GCC: an overview", *Corporate Governance*, Vol. 15 No. 3, pp. 315-338.

Smith, R. (2003), *Audit committees: Combined Code Guidance*, available at: www.ecgi.org/codes/documents/ac_report.pdf

Stančić, P., Čupić, M. and Barjaktarović Rakočević, S. (2012), "Influence of board size and composition on bank performance – case of Serbia", *Actual Problems of Economics*, Vol. 134 No. 8, pp. 466-475.

Su, Y., Xu, D. and Phan, P.H. (2008), "Principal–principal conflict in the governance of the Chinese public corporation", *Management and Organization Review*, Vol. 4 No. 1, pp. 17-38.

Turley, S. and Zaman, M. (2004), "The corporate governance effects of audit committees", *Journal of Management and Governance*, Vol. 8 No. 3, pp. 305-332.

Wan Mohammad, W.M., Wasiuzzaman, S. and Nik Salleh, N.M.Z. (2016), "Board and audit committee effectiveness, ethnic diversification and earnings management: a study of the Malaysian manufacturing sector", *Corporate Governance*, Vol. 16 No. 4, pp. 726-746.

Ward, A.J., Brown, J.A., *et al.* (2009), "Governance bundles, firm performance, and the substitutability and complementarity of governance mechanisms", *Corporate Governance: An International Review*, Vol. 17 No. 5, pp. 646-660.

Westphal, J.D. and Zajac, E.J. (1998), "The symbolic management of stockholders: corporate governance reforms and shareholder reactions", *Administrative Science Quarterly:*, Vol. 43 No. 1, pp. 127-153.

World Bank (2015), *World Development Indicators*, available at: http://databank.worldbank.org/data/home.aspx (accessed 08 April 2017).

Yermack, D. (1996), “Higher market valuation of companies with a small board of directors”, *Journal of Financial Economics*, Vol. 40 No. 2, pp. 85-211.

Yiyi, S., Xu, D. and Phan, P. (2008), “Principal-principal conflict in the governance of the Chinese public corporation”, *Management and Organization Review*, Vol. 4 No. 1, pp. 17-38.

Zaman Groff, M. and Valentinčič, A. (2011), “Determinants of voluntary audit committee formation in a two-tier board system of a post-transitional economy–the case of Slovenia”, *Accounting in Europe*, Vol. 8 No. 2, pp. 235-256.

Zhang, Y., Zhou, J. and Zhou, N. (2007), “Audit committee quality, auditor independence, and internal control weaknesses”, *Journal of Accounting and Public Policy*, Vol. 326 No. 3, pp. 300-327.

Corresponding author
Kamal Naser can be contacted at: profnaser@yahoo.co.uk

Downloaded by Birzeit University At 04:46 15 August 2017 (PT)

For instructions on how to order reprints of this article, please visit our website:
www.emeraldgrouppublishing.com/licensing/reprints.htm
Or contact us for further details: **permissions@emeraldinsight.com**