

DETERMINANTS OF THE VOLUNTARY FORMATION OF A COMPANY AUDIT COMMITTEE: EVIDENCE FROM PALESTINE

Yousef M. Hassan* and Rafiq H. Hijazi

*College of Business Administration
Al Ain University of Science and Technology
P. O. Box 64141, Al Ain
United Arab Emirates*

*Corresponding author: Yousef.hassan@aau.ac.ae

ABSTRACT

Drawing on agency theory, this paper investigates the determinants of voluntary audit committee (AC) formation among non-bank firms listed on the Palestine Stock Exchange (PSE). We used the annual reports of nearly all non-bank companies listed on the PSE as well as the company guides issued by the PSE for the period between 2010 and 2012. Logistic regression analysis was performed to identify the influence of a set of corporate governance mechanisms, ownership structures and company characteristics on the voluntary formation of ACs among non-bank Palestinian firms. The result of the analysis demonstrated that the AC is influenced by foreign ownership, institutional ownership, board diligence and external auditor type. This paper adds to the limited AC literature in Middle Eastern countries in general and in the Arab World in particular. This paper not only examines the determinants of the voluntary formation of ACs but also attempts to theorise about this formation.

Keywords: audit committee (AC), corporate governance, ownership structure, Palestine Stock Exchange

INTRODUCTION

Recent accounting scandals and large corporate fraud cases in the early 2000s have signalled the existence of serious flaws in corporate governance systems worldwide. These events have resulted in an increased focus on the need for more robust regulations and mechanisms to enhance corporate governance practices to minimise corporate risks and to instil transparency between company management and shareholders. Many countries have taken steps to introduce a

number of governance mechanisms for adoption by companies to ensure that the management agents (managers) are acting in the best interests of the principals (shareholders). The audit committee (AC) is one of these important governance mechanisms. The AC assists the board of directors with its duties overseeing the firm's financial reporting, internal control and audit requirements ([Chen, Lin, & Lin, 2008](#); [Sharma, Naiker, & Lee, 2009](#)). According to [Fearnley and Beattie \(2004\)](#), the AC acts as a mediator between a firm's board of directors, management and external auditors. The existence of an AC is expected to reduce information asymmetry ([Chung, Charoenwong, & Ding, 2004](#)), mitigate agency costs ([Reddy, Locke, & Scrimgeour, 2010](#)) and improve the information flow between company managers and shareholders ([Barako, Hancock, & Izan, 2007](#)).

The role of an AC in strengthening corporate governance and its determinants has been of interest to accounting researchers in developed countries ([Goddard & Masters, 2000](#); [Chen et al., 2008](#); [Beasley, Carcello, Hermanson, & Neal, 2009](#); [Bédard & Gendron, 2010](#)). A limited number of studies, however, have examined the role of the AC as a corporate governance mechanism in small emerging economies, especially those characterised by an unstable political and economic environment. This study has two main objectives. The first objective is to examine the underlying determinants that may influence the voluntary formation of ACs in non-bank firms listed on the Palestine Stock Exchange (PSE) between the years 2010–2012. The second objective is to evaluate the appropriateness of agency theory for explaining variations in the voluntary establishment of ACs among the studied companies.

We believe that Palestine, as an emerging economy, offers interesting and unique political, economic and cultural features different from those of other developed and emerging economies.

One of the distinguishing features of the Palestinian business environment is the high degree of political and economic uncertainty and the lack of control over major economic and fiscal policy instruments. The Palestinian National Authority (PNA) was formed in 1994, pursuant to the Oslo Accords between the Palestine Liberation Organization (PLO) and Israel, as a five-year transitional authority. Following the creation of the PNA, the Palestine Securities Exchange (PSE) was founded as a privately owned exchange in 1995, and it held its first trading session early in 1997. One of the PSE's key objectives was to develop domestic investments and facilitate foreign investment by providing a safe trading environment characterised by efficiency, fairness and transparency. However, since the five-year transitional period ended without reaching a comprehensive peace agreement, the Palestinian Territories (West Bank and Gaza Strip) have experienced extreme levels of political instability and violence. In a very unstable, uncertain economic and financial environment such as

Palestine, firms become more prone to agency problems, which are expected to have negative consequences on the performance of the stock market and to result in the loss of domestic and foreign investor confidence. Instead, the PSE has developed remarkably in terms of the number of firms listed, total market capitalisation and the percentages of both foreign and institutional ownership. The number of companies listed in the market has increased from 8 in 1997, with a market capitalisation not exceeding \$530 million, to 48 companies with a total market capitalisation of approximately \$2.86 billion by the end of 2012.

Another distinguishing institutional feature of the Palestinian business environment is the firm ownership structure. The difference in firm ownership and firm control is one of the primary differences between various countries' corporate governance systems. Within the context of Palestine, there are two types of controlling shareholders of listed firms, namely foreign and institutional shareholders. By the end of 2012, 41% and 36% of the total shares in the PSE were owned by foreign and institutional investors, respectively. These indicators reflect that the PSE has managed to attract, absorb, and retain considerable amounts of foreign and institutional investments despite extreme economic and political instability. As such, these classes of investors are expected to become increasingly involved in corporate governance (including AC formation) through their ability to influence decision making.

Based on the above-mentioned arguments, the current study provides an opportunity to investigate the role of audit committee establishment in a context in which political instability and agency conflicts are very high and ownership structure is different from that in other developed and emerging economies. To the best of the researchers' knowledge, no research to date has specifically addressed the AC's role in a Palestinian context. This study will benefit policy makers and the Palestinian Capital Market Authority (PCMA) by elucidating the status and the limitations of the current corporate governance code. In addition, the researchers are motivated to help expand the very limited existing research on an environment characterised by severe political and economic circumstances and a lack of control over major economic and fiscal policy instruments.

In line with the above objectives, this study endeavours to answer the following fundamental research question: Does the voluntary formation of audit committees in a high agency cost environment such as Palestine complement other corporate governance measures (board characteristics, quality of the external auditor and ownership structure) in reducing agency problems? To answer this question, agency theory is employed to identify the determinants of AC formation among non-bank firms listed on the PSE. According to agency theory, the formation of ACs is considered to be a reaction to information asymmetry between a company's owners and its management ([Köhler, 2005](#)).

Agency theory is the prevailing theoretical framework used to investigate the determinants of AC establishment and has been extensively used in the literature ([Bradbury, 1990](#); [Collier, 1993](#); [Menon & Williams, 1994](#); [Firth, Fung, & Rui, 2007](#)).

The rest of this paper is organised as follows. A brief overview of the corporate governance environment in the Palestinian Territories is presented in the following section. A review of the literature on the voluntary formation of ACs together with hypotheses development is offered in the subsequent section. The research methodology used in the study is discussed in section 3. Study findings are discussed in section 4, and the conclusion is presented in the last section of the paper.

Corporate Governance Environment in Palestine

The governance structure for financial regulation and supervision in Palestine falls under the jurisdiction of two authorities: the Palestine Monetary Authority (PMA) and the Palestine Capital Market Authority (PCMA). PMA was established in 1995 as an independent public institution to assist in maintaining the stability and effectiveness of the Palestinian financial system through prudential regulation and supervision in line with international best practices. The PCMA was established in 2005 as the regulator for the non-banking financial sectors. The PCMA oversees and regulates the securities market, insurance companies and real-estate institutions, while the PMA is responsible for banks, money exchangers and microfinance institutions. In 2009, each authority issued its own code of good corporate governance. While the PCMA's "Code of Corporate Governance in Palestine" applies to all firms with securities listed on the Palestine Stock Exchange (PSE), the PMA's "Corporate Governance Code for Banks" applies to the banking sector. The two codes are largely based on international standards. Both codes contain mandatory requirements that firms must adhere to along with additional guidelines representing good practices that are encouraged but not required. The PCMA code only encourages listed companies to form ACs (the dependent variable in our model) to ensure transparency of the company accounts and to inform stakeholders of the degree of risk facing the company. However, the PMA has adopted stricter standards for audit committees. The PMA code requires all banks to establish ACs comprising at least three nonexecutive board members with appropriate banking and financial expertise.

The PCMA's code addresses five fundamental aspects of the AC: general committee meetings, shareholders' compatible rights, corporate management, auditing, and disclosure and transparency. The relevant elements in the PCMA code include the following:

1. The code requires the board of directors in public shareholding firms to have between five and eleven members.
2. The code recommends having two board directors as independent members.
3. The code recommends that the board director not be involved in the firm's executive functions to maintain the distribution of authority and responsibility as well as to ensure better accountability.
4. The code requires shareholders to select the external auditors during their annual meeting based on the recommendation from the board of directors and the AC and to approve their fees. The external auditors should be licensed, independent of their clients and possessed of adequate professional competence for the tasks required.

LITERATURE REVIEW AND HYPOTHESIS

The role of the audit committee (AC) as a corporate governance mechanism has received considerable research attention over the past few decades in countries with different legal and regulatory frameworks for corporate governance. Groff and Valentinčič (2011) classified the empirical AC literature into two main areas. The first area includes studies that assessed the determinants of voluntary AC formation (Bradbury, 1990; Collier, 1993; Menon & Williams, 1994; Deli & Gillan, 2000; Carson, 2002; Piot, 2004; Firth et al., 2007). Three main categories of determinants influencing the establishment of a voluntary AC have emerged from these studies: (i) firm characteristics, including variables such as firm size and leverage (Bradbury, 1990; Collier, 1993; Adams, 1997) and (ii) board structure, including variables such as board size (Bradbury, 1990), board independence (Pincus, Rusbarsky, & Wong, 1989; Collier, 1993; Chau & Leung, 2006), external audit quality (Eichenseher & Shields, 1985; Pincus et al., 1989; Bradbury, 1990; Collier, 1993) and the influence of ownership structure (Bradbury, 1990; Collier, 1993; Chau & Leung, 2006). The second area of AC research includes studies focused on factors affecting the quality and effectiveness of the AC. This stream of research assumes that the mere formation of an AC does not necessarily mean that it functions properly or achieves a particular governance outcome (Turley & Zaman, 2004; Firth et al., 2007).

AC effectiveness has been measured by various proxies such as AC size (Krishnan, 2005; Bronson, Carcello, & Raghunandan, 2006), AC independence (Krishnan, 2005; Bronson et al., 2006; Zhang, Zhou, & Zhou, 2007), the financial expertise of the committee members (Krishnan, 2005; Zhang et al., 2007) and committee diligence (Willekens, Bauwhede, & Gaeremynck, 2004; Turley & Zaman, 2007; Sharma et al., 2009; Greco, 2011). The majority of prior studies used agency theory to investigate the determinants of the voluntary formation of an AC (Bradbury, 1990; Collier, 1993; Menon & Williams, 1994; Piot, 2004;

Firth et al., 2007). Drawing on agency theory, the current study expands the literature by examining the selected factors hypothesised to influence the voluntary formation of ACs in Palestine. These factors and the rationale behind including them in the study are discussed below.

Board Characteristics

The board of directors is viewed as one of the most important internal corporate governance mechanisms for reducing the agency problems arising from the separation of ownership and management (Fama & Jensen, 1983; Belkhir, 2009). According to agency theory, hired managers may use the firm's resources to satisfy their personal interests, which may differ from the owners' interests (Oyejide & Soyibo, 2001). Thus, to minimise agency conflict between managers and owners, the board of directors is expected to serve as a guardian of the owners' interests (Kroll, Walters, & Wright, 2008). Prior studies have identified several features of the board of directors that are likely to influence its effectiveness in monitoring management and improving the quality of corporate reporting and performance. These features include board size, board independence, and the frequency of board meetings (Karamanou & Vafeas, 2005).

Many researchers have argued that larger boards are less effective in their monitoring function due to communication and coordination difficulties that may arise between members (Yawson, 2006; Dimitropoulos & Asteriou, 2010). These problems increase the conflict between board members and decrease board efficiency. Thus, ACs may provide a monitoring mechanism that reduces high agency costs. Menon and Williams (1994) documented that agency costs drive the voluntary formation of ACs. Bradbury (1990) argued that to form an AC, a company needs a sufficient number on the board of directors. However, a company with a small board has low coordination costs and is more likely to fulfil its monitoring tasks without forming an AC (Bushman, Chen, Engel, & Smith, 2004) or is less likely to delegate part of its responsibilities to an AC for efficiency reasons (Piot, 2004). Previous research supported these arguments and indicated that the board size is positively associated with the existence of an AC (Bradbury, 1990; Piot, 2004). For example, Bradbury (1990), using a sample of 135 firms listed on the New Zealand Stock Exchange, noticed that the AC plays an efficient monitoring rule as the number of the firm's board members increases. Therefore, the following hypothesis is proposed:

H1: There is a positive association between the likelihood of voluntary AC formation and board size.

Board diligence, as measured by the frequency of board meetings, is another important measure of board monitoring power (Jensen, 1993). Mangena and Tauringana (2008) argued that companies with more frequent board meetings are likely to perform better than companies with less frequent meetings. Frequent board meetings improve monitoring quality (Ntim, 2009) and create and strengthen the relationships between directors (Lipton & Lorsch, 1992). Thus, companies with more board meetings may be more likely to have effective ACs (Raghunandan & Rama, 2007). Therefore, the following hypothesis is proposed:

H2: There is a positive relationship between the likelihood of voluntary AC formation and board diligence.

Ownership Structure

Variations in ownership structure have been identified as one of the primary reasons for differences in corporate governance across countries (Li, 1995). Agency theory argues that because of their typically larger holdings, institutional investors play a significant role in the corporate governance practices of the firms that they invest in compared to individual investors. Therefore, institutional investors have a greater incentive to observe management behaviour and prevent managerial expropriation of shareholders' interests. In addition, institutional investors (as large blockholders) have more resources and incentives to actively monitor management than small investors (Aljifri & Moustafa, 2007; Ping & Wing, 2011) or some board members who may have little investment in the firm (Shleifer & Vishny, 1986). Finally, institutional investors have greater expertise and can monitor management at a lower cost than individual shareholders (Pound, 1988). Feldmann and Schwarzkopf (2003) found that the presence of institutional shareholders is positively associated with a set of sound corporate governance mechanisms such as the proportion of external directors, turnover of the board members and the establishment of an AC. Pucheta and De Fuentes (2007) suggested that the existence of institutional investors on the board of directors will encourage voluntary formation of ACs. Accordingly, it is reasonable to expect that institutional investors have a significant influence on the voluntary formation of ACs as a key corporate governance mechanism. Therefore, the following hypothesis is proposed:

H3: There is a positive association between the likelihood of voluntary AC formation and the percentage of shares held by institutional investors.

Foreign ownership acts as a monitoring mechanism for management's behaviour and improves corporate governance in emerging markets (Bekaert, & Harvey, 2002). Foreign shareholders are usually more vulnerable to expropriation

risk from local shareholders and/or management than local investors. Local investors have an information advantage relative to their foreign counterparts, who are geographically separated from management, due to relatively easier access to firm relevant information (Coval & Moskowitz, 2001; Ivković & Weisbenner, 2005). To reduce agency conflicts between local investors and/or management, on the one hand, and foreign investors, on the other hand, and to boost confidence among foreign investors to invest in a particular firm, effective corporate governance mechanisms are needed (Bushman & Smith, 2003). Hallward-Driemeier (2001) reported that firms with a high percentage of shares held by foreign investors are expected to be more effective and to have better corporate governance than those with a lower percentage or without foreign ownership. Due to the risks associated with foreign investing, previous studies reported that foreign investors prefer not to invest in emerging markets due to both poor corporate governance and weak transparency (Banz & Clough, 2002; Gibson, 2003). However, Mangena and Tauringana (2007) documented a positive relationship between the percentage of shares held by foreign shareholders and the presence of ACs. Therefore, the following hypothesis is proposed:

H4: There is a positive association between the likelihood of voluntary AC formation and the percentage of shares held by foreign investors.

External Auditor

Previous literature has identified a large audit firm as being one of the Big Four international audit firms (Haniffa & Cooke, 2002; Glaum & Street, 2003). Because large international audit firms are usually supported by more technical experts and are more concerned for their reputation than small local auditors, they tend to associate with clients that have effective corporate governance. Therefore, large external audit firms are more likely to deliver high quality audit service (DeAngelo, 1981; Palmrose, 1988) and to ask firms to establish ACs to follow best practices. In this regard, Eichenseher and Shields (1985) found that the existence of an AC is positively related with having a large independent auditor. Therefore, the following hypothesis is proposed:

H5: There is a positive association between the likelihood of voluntary AC formation and the external auditor type.

Firm Size

A number of studies have documented that corporate firm size has a positive association with internal monitoring (Boone, Casares Field, Karpoff, & Raheja, 2007; Guest, 2009). Because large firms face more information asymmetry and

higher vulnerability to agency conflicts (Jensen, 1986), they have greater demand for the adoption of sound governance mechanisms such as AC formation (Adams, 1997). Prior literature reported a positive association between firm size and AC formation (Piot, 2004; Firth et al., 2007; Benzing, Leach, & McGee, 2011). One explanation for this finding suggests that large companies tend to establish sound governance structures, including AC formation, to attract prospective investors in the capital market and to enhance the confidence of these investors. Therefore, the following hypothesis is proposed:

H6: There is a positive association between the likelihood of voluntary AC formation and firm size.

Financial Performance

Corporate financial performance is another variable used in the literature to explain the extent of disclosure. Agency theory suggests that managers of profitable companies are more likely to disclose more information to provide assurance to investors and to support their continuation and compensation (Oyeler, Laswad, & Fisher, 2003). This suggestion implies that firms with higher firm performance show good corporate governance, and investors' trust grows. Therefore, the following hypothesis is proposed:

H7: There is a positive association between the likelihood of voluntary AC formation and firm financial performance.

RESEARCH METHODOLOGY

Data

The sample used in the current study includes non-bank companies listed in the Palestine Stock Exchange between 2010 and 2012. The sample represents the four non-banking sectors, namely manufacturing, service, insurance and investment firms. The banking sector is excluded because it is subject to the PMA governance code, which is different from the PCMA code that applies to the other four sectors. The PMA code requires all banks to have ACs. Data were collected from the annual reports of the selected companies as well as from the annual company guides issued by the PSE during the period between 2010 and 2012. As of 31 December 2012, there were 48 listed firms in the PSE, with a market capitalisation of US\$ 2,859,140,375. These firms include 9 banks and financial service companies, 7 insurance companies, 13 service companies, 8 investment companies, and 11 manufacturing companies. Initially, all of the 39 non-bank listed companies were included in the sample. However, 7 firms were

subsequently excluded because they did not have complete records for the data related to the variables used in the study. Thus, the final sample consists of 96 observations for 32 firms during the three-year period.

Variables

The dependent variable is the voluntary establishment of the AC, which has a value equal to one if the firm has voluntarily established an AC and 0 otherwise. The independent variables include a set of corporate governance mechanisms and the firm characteristics: board size, board diligence, institutional ownership, foreign ownership, external auditor type, firm size, and firm profitability. The independent variables used in the current study, their proxies and their expected directions are presented in Table 1.

Table 1
Independent variables in the model

Variable	Measurement	Expected
BDSIZE	Board Size: The total number of board directors.	+
MEET	Diligence: Number of board meetings held in the year.	+
INSTIT	Institutional Ownership: Percentage of ordinary shares held by institutional investors.	+
FORGN	Foreign Ownership: Percentage of ordinary shares held by foreign investors.	+
AUDIT	External Auditor: Dummy, 1 is given to the big four audit firm and 0 otherwise.	+
SIZE	Firm size: measured by the natural logarithm of total market capitalisation.	+
ROA	Financial performance: Net income divided by the total assets at the end of the year.	+

Methodology

In this study, the logistic regression model will be used to examine the effects of the seven independent variables listed in Table 1 on the likelihood of establishing a voluntary AC. To account for the panel nature of the data, in particular, the individual company heterogeneity, a random effects logit model will be employed.

Let π_i represent the probability that the i^{th} company has established an AC (i.e., $ADCOM_i = 1$), and let the term $\frac{\pi_i}{1-\pi_i}$ be the odds of establishing an AC. Therefore, the random effects logit model may be expressed as:

$$\text{Logit}(\pi_i) = \ln\left(\frac{\pi_i}{1-\pi_i}\right) = \beta_{0i} + \beta_1\text{BDSIZE} + \beta_2\text{MEET} + \beta_3\text{INSTIT} + \beta_4\text{FORGN} + \beta_5\text{AUDIT} + \beta_6\text{SIZE} + \beta_7\text{ROA} + \varepsilon$$

where β_{0i} is the random intercept, β_1 to β_7 are the model parameters, and ε is a random error.

EMPIRICAL RESULTS

Descriptive Statistics and Correlation Analysis

Table 2 gives the descriptive statistics for the variables included in this study over the 2010–2012 period. As shown in the table, the percentage of companies with ACs has doubled (19% to 38%) over the 2010–2012 period. The average number of board members and the average number of meetings were constant at 9 and 5, respectively. Over the three-year period, approximately half of the companies had an external auditor. Moreover, there were no notable changes in the ownership structures over the 2010–2012 period, and the average percentages of institutional and foreign ownership were approximately 48% and 27%, respectively. Similarly, firm size, represented by the logarithm, showed no significant changes over the period.

Table 2
Descriptive statistics for 2010–2012 pooled data ($n = 96$)

Variable	Year	Minimum	Maximum	Mean	Std. Deviation
ADCOM	2010	0	1	0.19	0.397
	2011	0	1	0.31	0.471
	2012	0	1	0.38	0.492
	Pooled	0	1	0.29	0.457
BDSIZE	2010	5	14	9.03	2.102
	2011	5	14	9.03	1.926
	2012	5	15	9.00	2.314
	Pooled	5	15	9.02	2.098
MEET	2010	1	13	5.22	2.268
	2011	1	10	5.09	1.573
	2012	1	7	5.53	1.319
	Pooled	1	13	5.28	1.757

(continued on next page)

Table 2. (continued)

Variable	Year	Minimum	Maximum	Mean	Std. Deviation
INSTIT	2010	0	100	46	32
	2011	0	100	49	34
	2012	0	100	48	33
	Pooled	0	100	48	33
FORGN	2010	0	83	28	30
	2011	0	87	27	29
	2012	0	86	27	30
	Pooled	0	87	27	29
AUDIT	2010	0	1	0.50	0.508
	2011	0	1	0.53	0.507
	2012	0	1	0.50	0.508
	Pooled	0	1	0.51	0.503
SIZE	2010	13.51	20.70	16.605	1.363
	2011	13.51	20.71	16.561	1.399
	2012	13.26	20.68	16.480	1.457
	Pooled	13.26	20.71	16.549	1.390
ROA	2010	-0.17	0.178	0.022	0.089
	2011	-0.194	0.158	0.005	0.085
	2012	-0.199	0.184	0.013	0.075
	Pooled	-0.199	0.184	0.013	0.083

The correlation coefficients for the dependent and independent variables are presented in Table 3. The results indicate that companies with diligent boards, higher foreign ownership and a big four external auditor are more likely to have an AC. Notably, there are no high correlations among the independent variables, and hence there are no concerns about multicollinearity.

Table 3
Pearson correlation coefficients

	ADCOM	BDSIZE	MEET	INSTIT	FORGN	AUDIT	SIZE	ROA
ADCOM	1.000							
BDSIZE	0.169	1.000						
MEET	0.224*	-0.093	1.000					
INSTIT	-0.025	0.276**	0.002	1.000				
FORGN	0.409**	0.145	-0.245*	0.194	1.000			
AUDIT	0.216*	0.110	-0.093	0.340**	0.148	1.000		
SIZE	0.150	0.255*	-0.042	0.121	0.188	0.267**	1.000	
ROA	-0.096	0.042	-0.360**	-0.045	0.292**	0.144	0.263**	1.000

* Correlation is significant at the 0.05 level.

** Correlation is significant at the 0.01 level.

Random Effects Logit Model Analysis

Table 4 gives the results of the random effects logit model for the probability of voluntarily establishing an audit committee. Based on the likelihood-ratio test, the intra-class correlation coefficient (0.546) for the model is highly significant ($\chi^2 = 5.45$, p -value = 0.010). This result indicates the importance of the panel-level variation component in the model and supports the preference for the random effects logit model over the pooled logit model (Rodríguez & Elo, 2003). Moreover, as the Wald Chi Square test indicates, the fitted model is moderately significant at the 10% level ($\chi^2 = 12.46$, p -value = 0.0863). Furthermore, the model explained between 23% (McFadden R-square) and 30% (Nagelkerke R-square) of the variation in the voluntary formation of audit committee.

Table 4
Random-effects logistic regression model with ADCOM as dependent variable

Regression Coefficients				
Variable	B	z	p-value	Odds Ratio
Constant	-14.040	-2.21	0.027	0.00
BDSIZE	0.405	1.34	0.180	1.50
MEET	0.973	2.29	0.022	2.65
INSTIT	-0.041	-1.93	0.053	0.96
FORGN	0.078	3.09	0.002	1.08
AUDIT	2.673	2.03	0.043	14.48
SIZE	0.080	0.26	0.793	1.08
ROA	-9.615	-1.33	0.183	0.00
Model Diagnostics				
Intra-class correlation (ρ):	0.546			
Likelihood Ratio Test:	$\chi^2 = 5.45$, p -value = 0.010			
WaldChi Square Test:	$\chi^2 = 12.46$, p -value = 0.0863			
McFadden's Pseudo R ² :	0.226			
Nagelkerke Pseudo R ² :	0.304			

Additionally, the aforementioned intra-class correlation for the model indicates a moderately high correlation between a company's tendency to establish an audit committee in the different years. Finally, as shown in Table 5, the model correctly classified 81.3% of companies.

Table 5
Classification table of formation of AC

Observed	Predicted		Percentage Correct
	Yes	No	
Yes	14	14	50
No	4	64	94
Overall percentage			81.3

As indicated in Table 4, the significant variables at a 5% level in descending order based on the odds ratio (OR) are AUDIT, MEET and FORGN. Moreover, a significant effect from INSTIT has been observed at a 10% level. The results indicate that the companies that hire big international audit firms are more likely (OR = 14.48) to have an audit committee compared to those who are audited by local audit firms or small audit offices. Additionally, for every additional meeting the board holds annually, the odds of forming an audit committee will likely double (OR = 2.65). Moreover, when the percentage of foreign ownership increases by 1%, the odds of forming an audit committee will slightly increase (OR = 1.08). However, as institutional ownership increases, it becomes less likely that the company will form an audit committee (OR = 0.96).

This result is consistent with agency theory. According to agency theory, foreign investors are more likely to depend on effective corporate governance structures (such as the formation of an AC), which constrains management and/or local shareholders from expropriating other (foreign) investors. Managers of firms with a high percentage of foreign ownership tend to run their firms effectively to reduce agency costs and protect foreign investors who are geographically separated from firm (Schipper, 1981). This finding indicates that foreign investors are able to bring global best governance practices (such as ACs) to Palestinian firms that may reduce information asymmetry and agency costs. The result is not surprising because it is in line with findings obtained in prior literature (Mangena & Taurigana, 2007).

As predicted, a positive and significant association has been reported between board diligence, as measured by the board's meeting frequency (MEET), and the existence of an AC. This result also lends support to agency theory, which suggests that boards that meet more frequently can effectively advise and monitor management and hence enhance corporate governance. This finding is also in line with Raghunandan and Rama (2007), who found that the boards that meet more frequently are more likely to have effective ACs.

Contrary to expectations, regression results indicated that institutional ownership has a marginally significant (at the 10% level) negative influence on

the formation of an AC. This result does not support the agency theory assumption that institutional investors are expected to mitigate agency costs and enhance corporate performance. This finding is also contrary to findings from some earlier studies suggesting that institutional investors have more influence than individual investors in improving corporate governance structures in general (Karamanou & Vafeas, 2005) and in the formation of ACs in particular (Pucheta-Martínez & De Fuentes, 2007). It is very likely that firms with a higher level of ownership concentrated in the hands of institutional investors will be less concerned about agency problems. Institutional investors can exploit their power as blockholders to request information directly from company management and thus to maximise their own interests at the expense of minority shareholders who cannot closely monitor managers' behaviour (Köhler, 2009). In this case, the possibility of forcing management to voluntarily form an AC to reflect the company's commitment to sound corporate governance practices is remote.

As predicted, a significantly positive relationship has been reported between using a large external auditor and the voluntary formation of an AC. This result supports agency theory by suggesting that large external audit firms encourage their clients to adopt active governance mechanisms such as voluntarily establishing ACs to regulate conflicts of interest and mitigate agency costs. This finding concurs with findings from earlier studies (Eichenseher & Shields, 1985).

Although both the board size (BDSIZE) and the firm size (SIZE) variables have been found to be positively related to the establishment of an AC, this association, however, is not significant. Thus, these findings lend only partial support to agency theory, which argues that large firms and firms with a greater number of directors are more likely to establish ACs to mitigate the high agency costs they experience due to complexity as well as communication and coordination problems. These results are contrary to some earlier findings that documented a significant and positive relationship between board size and the voluntary formation of the AC (Bradbury, 1990; Piot, 2004; Firth et al., 2007; Huang, Zhang, Deis, & Moffitt, 2009; Benzing et al., 2011).

It is worth noting that we have performed several other regression models to check the robustness of the used model including the population-averaged logit model, the random effects probit model, and the population-averaged probit model. Generally, the results of these models were qualitatively similar to and consistent with those presented in Table 4.

CONCLUSION

This paper expands the limited knowledge in the company audit committee literature about Arab and Middle Eastern countries in general and Palestine in particular. From an agency theory perspective, we have investigated eight potential determinants of voluntary audit committee formation among the non-bank firms listed on the Palestine Stock Exchange (PSE). The main finding is that agency theory appears to be a powerful theory for explaining the voluntary creation of audit committees in a small emerging economy such as Palestine. The study suggests that the voluntary formation of ACs in a high agency cost environment such as Palestine complements other corporate governance measures such as board characteristics, quality of the external auditor and foreign ownership structure in reducing agency problems. Therefore, agency theory, which has gained support in developed and industrialised emerging economies, can also be employed to address corporate governance problems in small emerging markets with different institutional settings.

To strengthen the audit committee's role as a financial monitor, the current study recommends that policy makers and the Palestinian Capital Market Authority (PCMA) mandate the establishment of ACs by all listed companies and require that the composition, operation and responsibility of these committees be in line with international best practices.

The current study has two limitations. First, because of the small sample size, the findings – although significant – are not generalisable with a high degree of confidence. Second, the primary focus of this study is on the determinants of just the formation of an AC and not on the factors that influence the effectiveness of the AC. Many researchers have argued that the mere creation of an audit committee does not necessarily imply that these committees possess a certain level of effectiveness (Kalbers & Fogarty, 1998) or that sound governance has been achieved by the firm (Turley & Zaman, 2004). In our study, very few firms disclosed information about their AC characteristics because the PCMA code only encourages the listed companies to form ACs and does not require any disclosure related to AC characteristics. Thus, direct measures of AC effectiveness are not available.

REFERENCES

- Adams, M. (1997). Determinants of audit committee formation in the life insurance industry: New Zealand evidence. *Journal of Business Research*, 38(2), 123–129.

- Aljifri, K., & Moustafa, M. (2007). The impact of corporate governance mechanisms on the performance of UAE firms: an empirical analysis. *Journal of Economic and Administrative Sciences*, 23(2), 71–93.
- Banz, R., & Clough, S. (2002). Globalization reshaping world's financial markets. *Journal of Financial Planning*, 15(4), 72–80.
- Barako, D. G., Hancock, P., & Izan, H. (2007). Determinants of voluntary disclosures in Kenyan companies annual reports. *African Journal of Business Management*, 1(5), 113–128.
- Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Neal, T. L. (2009). The audit committee oversight process. *Contemporary Accounting Research*, 26(1), 65–122.
- Bekaert, G., & Harvey, C. R. (2002). Research in emerging markets finance: Looking to the future. *Emerging Markets Review*, 3(4), 429–448.
- Belkhir, M. (2009). Board of directors' size and performance in the banking industry. *International Journal of Managerial Finance*, 5(2), 201–221.
- Benzing, C., Leach, E., & McGee, C. (2011). Sarbanes-Oxley and the New Form 990: Are arts and culture nonprofits ready? *Nonprofit and Voluntary Sector Quarterly*, 40(6), 1132–1147.
- Boone, A. L., Casares Field, L., Karpoff, J. M., & Raheja, C. G. (2007). The determinants of corporate board size and composition: An empirical analysis. *Journal of Financial Economics*, 85(1), 66–101.
- Bradbury, M. E. (1990). The incentives for voluntary audit committee formation. *Journal of Accounting and Public Policy*, 9(1), 19–36.
- Bronson, S. N., Carcello, J. V., & Raghunandan, K. (2006). Firm characteristics and voluntary management reports on internal control. *Auditing: A Journal of Practice & Theory*, 25(2), 25–39.
- Bushman, R., Chen, Q., Engel, E., & Smith, A. (2004). Financial accounting information, organizational complexity and corporate governance systems. *Journal of Accounting and Economics*, 37(2), 167–201.
- Bushman, R. M., & Smith, A. J. (2003). Transparency, financial accounting information, and corporate governance. *Economic Policy Review, Federal Reserve Bank of New York*, 9, 65–90.
- Bédard, J., & Gendron, Y. (2010). Strengthening the financial reporting system: can audit committees deliver? *International Journal of Auditing*, 14(2), 174–210.
- Carson, E. (2002). Factors associated with the development of board sub-committees. *Corporate Governance: An International Review*, 10(1), 4–18.
- Chau, G., & Leung, P. (2006). The impact of board composition and family ownership on audit committee formation: Evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation*, 15(1), 1–15.
- Chen, C. Y., Lin, C. J., & Lin, Y. C. (2008). Audit partner tenure, audit firm tenure, and discretionary accruals: Does long auditor tenure impair earnings quality? *Contemporary Accounting Research*, 25(2), 415–445.
- Chung, K. H., Charoenwong, C., & Ding, D. K. (2004). Penny pricing and the components of spread and depth changes. *Journal of Banking & Finance*, 28(12), 2981–3007.
- Collier, P. (1993). Factors affecting the formation of audit committees in major UK listed companies. *Accounting and Business Research*, 23(supl.), 421–430.

- Coval, J. D., & Moskowitz, T. J. (2001). The geography of investment: Informed trading and asset prices. *Journal of Political Economy*, 109(4), 811–841.
- DeAngelo, L. E. (1981). Auditor size and audit quality. *Journal of Accounting and Economics*, 3(3), 183–199.
- Deli, D. N., & Gillan, S. L. (2000). On the demand for independent and active audit committees. *Journal of Corporate Finance*, 6(4), 427–445.
- Dimitropoulos, P. E., & Asteriou, D. (2010). The effect of board composition on the informativeness and quality of annual earnings: Empirical evidence from Greece. *Research in International Business and Finance*, 24(2), 190–205.
- Eichenseher, J. W., & Shields, D. (1985). Corporate director liability and monitoring preferences. *Journal of Accounting and Public Policy*, 4(1), 13–31.
- Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301–325.
- Fearnley, S., & Beattie, V. (2004). The reform of the UK's auditor independence framework after the enron collapse: An example of evidence-based policy making. *International Journal of Auditing*, 8(2), 117–138.
- Feldmann, D. A., & Schwarzkopf, D. L. (2003). The effect of institutional ownership on board and audit committee composition. *Review of Accounting and Finance*, 2(4), 87–109.
- Firth, M., Fung, P. M., & Rui, O. M. (2007). Ownership, two-tier board structure, and the informativeness of earnings: Evidence from China. *Journal of Accounting and PUBLIC Policy*, 26(4), 463–496.
- Gibson, M. S. (2003). Is corporate governance ineffective in emerging markets? *Journal of Financial and Quantitative Analysis*, 38(01), 231–250.
- Glaum, M., & Street, D. L. (2003). Compliance with the disclosure requirements of Germany's new market: IAS versus US GAAP. *Journal of International Financial Management & Accounting*, 14(1), 64–100.
- Goddard, A. R., & Masters, C. (2000). Audit committees, Cadbury Code and audit fees: an empirical analysis of UK companies. *Managerial Auditing Journal*, 15(7), 358–371.
- Greco, G. (2011). Determinants of board and audit committee meeting frequency: Evidence from Italian companies. *Managerial Auditing Journal*, 26(3), 208–229.
- Groff, M. Z., & 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*, 8(2), 235–256.
- Guest, P. M. (2009). The impact of board size on firm performance: Evidence from the UK. *The European Journal of Finance*, 15(4), 385–404.
- Hallward-Driemeier, M. (2001). *Firm-level survey provides data on Asia's corporate crisis and recovery* (Vol. 2515): World Bank Publications.
- Haniffa, R. M., & Cooke, T. E. (2002). Culture, corporate governance and disclosure in Malaysian corporations. *Abacus*, 38(3), 317–349.
- Huang, P., Zhang, Y., Deis, D. R., & Moffitt, J. S. (2009). Do artificial income smoothing and real income smoothing contribute to firm value equivalently? *Journal of Banking and Finance*, 33(2), 224–233.
- Ivković, Z., & Weisbenner, S. (2005). Local does as local is: Information content of the geography of individual investors' common stock investments. *The Journal of Finance*, 60(1), 267–306.

- Jensen, M. C. (1986). Agency costs of free cash flow, corporate finance, and takeovers. *The American Economic Review*, 76(2), 323–329.
- Jensen, M. C. (1993). The modern industrial revolution, exit and the failure of internal control systems. *Journal of Finance*, 48(3), 831–880.
- Kalbers, L., & Fogarty, T. (1998). Organizational and economic explanations of audit committee. *Journal of Managerial Issues*, 10(2), 129–150.
- Karamanou, I., & Vafeas, N. (2005). The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis. *Journal of Accounting Research*, 43(3), 453–486.
- Krishnan, J. (2005). Audit committee quality and internal control: An empirical analysis. *The Accounting Review*, 80(2), 649–675.
- Kroll, M., Walters, B. A., & Wright, P. (2008). Board vigilance, director experience, and corporate outcomes. *Strategic Management Journal*, 29(4), 363–382.
- Köhler, A. G. (2005). Audit committees in Germany-theoretical reasoning and empirical evidence. *Schmalenbach Business Review (SBR)*, 57(3), 229 – 252.
- Köhler, M. (2009). Blockholdings and corporate governance in the EU banking sector: ZEW Discussion Papers.
- Li, J. (1995). Foreign entry and survival: Effects of strategic choices on performance in international markets. *Strategic Management Journal*, 16(5), 333–351.
- Lipton, M., & Lorsch, J. W. (1992). A modest proposal for improved corporate governance. *The Business Lawyer*, 59–77.
- Mangena, M., & Taurigana, V. (2007). Disclosure, corporate governance and foreign share ownership on the Zimbabwe Stock Exchange. *Journal of International Financial Management & Accounting*, 18(2), 53–85.
- Mangena, M., & Taurigana, V. (2008). Audit committees and voluntary external auditor involvement in UK interim reporting. *International Journal of Auditing*, 12(1), 45–63.
- Menon, K., & Williams, J. D. (1994). The use of audit committees for monitoring. *Journal of Accounting and Public Policy*, 13(2), 121–139.
- Ntim, C. G. (2009). *Internal corporate governance structures and firm financial performance: evidence from South African listed firms*. University of Glasgow.
- Oyeler, P., Laswad, F., & Fisher, R. (2003). Determinants of internet financial reporting by New Zealand companies. *Journal of International Management and Accounting*, 14(1), 26–63.
- Oyejide, T. A., & Soyibo, A. (2001). Corporate governance in Nigeria. Paper presented at The Conference on Corporate Governance, 29–30 January, Accra, Ghana.
- Palmrose, Z. V. (1988). Audit fees and auditor size: Further evidence. *Journal of Accounting Research*, 97–110.
- Pincus, K., Rusbarsky, M., & Wong, J. (1989). Voluntary formation of corporate audit committees among NASDAQ firms. *Journal of Accounting and Public Policy*, 8(4), 239–265.
- Ping, Z., & Wing, C. (2011). Corporate governance: A summary review on different theory approaches. *International Research Journal of Finance and Economics*, 68, 7–13.
- Piot, C. (2004). The existence and independence of audit committees in France. *Accounting and Business Research*, 34(3), 223–246.

- [Pound, J. \(1988\). Proxy contests and the efficiency of shareholder oversight. *Journal of Financial Economics*, 20, 237–265.](#)
- [Pucheta-Martínez, M. C., & 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*, 15\(6\), 1394–1412.](#)
- [Raghunandan, K., & Rama, D. V. \(2007\). Determinants of audit committee diligence. *Accounting Horizons*, 21\(3\), 265–279.](#)
- [Reddy, K., Locke, S., & Scrimgeour, F. \(2010\). The efficacy of principle-based corporate governance practices and firm financial performance: An empirical investigation. *International Journal of Managerial Finance*, 6\(3\), 190–219.](#)
- [Rodríguez, G., & Elo, I. \(2003\). Intra-class correlation in random-effects models for binary data. *The Stata Journal*, 3\(1\), 32–46.](#)
- [Schipper, K. \(1981\). Discussion of voluntary corporate disclosure: The case of interim reporting. *Journal of Accounting Research*, 85–88.](#)
- [Sharma, V., Naiker, V., & Lee, B. \(2009\). Determinants of audit committee meeting frequency: Evidence from a voluntary governance system. *Accounting Horizons*, 23\(3\), 245–263.](#)
- [Shleifer, A., & Vishny, R. W. \(1986\). Large shareholders and corporate control. *The Journal of Political Economy*, 461–488.](#)
- [Turley, S., & Zaman, M. \(2004\). The corporate governance effects of audit committees. *Journal of Management and Governance*, 8\(3\), 305–332.](#)
- [Turley, S., & Zaman, M. \(2007\). Audit committee effectiveness: informal processes and behavioural effects. *Accounting, Auditing & Accountability Journal*, 20\(5\), 765–788.](#)
- [Willekens, M., Bauwhede, H. V., & Gaeremynck, A. \(2004\). Voluntary audit committee formation and practices among Belgian listed companies. *International Journal of Auditing*, 8\(3\), 207–222.](#)
- [Yawson, A. \(2006\). Evaluating the characteristics of corporate boards associated with layoff decisions. *Corporate Governance: An International Review*, 14\(2\), 75–84.](#)
- [Zhang, Y., Zhou, J., & Zhou, N. \(2007\). Audit committee quality, auditor independence, and internal control weaknesses. *Journal of Accounting and Public Policy*, 26\(3\), 300–327.](#)