

Audit Committee Characteristics and Firm Performance: Evidence from Egyptian Listed Companies

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The focus of this study is in the area of corporate governance. The overall aim of this research is to advance an understanding of the relationship between the audit committee characteristics and the firm performance represented by the ROA, ROE and Tobin's Q. Such a study is important because forming an audit committee enhances investors' expectancy of receiving improved financial reports. As a result, the firm will more likely experience an increase in its earnings response coefficients. In addition, companies with an audit committee are less likely to experience errors, irregularities and other indicators of unreliable financial reporting. The research approach adopted in this research includes GLS random effect regression over the nine year test period which test for the existence of the proposed relationship between board characteristics and firm performance. This study will reflect the impact of the recent developments in the corporate governance in Egypt on corporate performance from 2004 which is considered the year of issuance of the Egyptian code of corporate governance till 2012. The sample used in the study is based on the 50 most active Egyptian companies listed in the Egyptian stock market; these companies are considered the best reflection for the Egyptian market. The findings from this research provide evidence that there is a positive relationship between the proportion of independent directors on the board and firm financial performance as measured by ROE, board meetings results showed a positive significant relationship with ROE, CEO duality showed a significant positive relationship with ROE, and the director ownership is positively associated with firm performance as measured by ROE, but the relation is not significant. The relationship between these factors and the other performance measures; ROA and Tobin's Q are also investigated.

Keywords: Audit Committee, Corporate Governance, Financial Performance

1. Introduction

In order for corporate governance to be improved, three well accepted oversight committees were established, through which board duties could be rigorously discharged (Higgs, 2003, p. 59). As stated by Tricker, 1994, these committees are audit, nomination, and remuneration (or compensation).

Moreover, a recent perspective has been raised outpointing that not only the composition of the board is responsible for controlling the board, but rather both, the structure and composition of the board's subcommittees are responsible too. Kesner (1988) maintains that most important board decisions originate at the committee level, and Vance, (1983), argues that there are four board committees that greatly influence corporate activities; these are audit, executive, compensation, and nomination committee.

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Recent high profile accounting scandals, (e.g. waste management and WorldCom) and the collapse of Enron are among the main causes behind the flourishing of the role of audit committees in ensuring the quality of corporate financial reporting. Since then, the role of audit committee has come under the microscope, attracting the majority of the corporate governance studies (Yang et al, 2006).

2. Literature Review

2.1 Importance of audit committee

The main function of an audit committee is monitoring the firm's financial performance and financial reporting. In this sense, it is expected that audit committees should strongly affect the selection, removal and remuneration of auditors, the content and extent of audit work, auditor independence, and the resolution of disputes between auditors and executive management. Also audit committees should review and agree upon chosen accounting policies. As well as they tend to persuade a company's approach to financial reporting, levels of disclosure, and adherence to standard practice. Also, besides monitoring the reliability of the company's accounting processes, audit committees should ensure the compliance with corporate legal and ethical standards, including the maintenance of preventive fraud controls (Turley and Zaman, 2004).

Many major studies have discussed the importance of audit committees. For instance; Wild, (1996), stated that forming an audit committee enhances investors' expectancy of receiving improved financial reports. As a result, the firm will more likely experience an increase in its earnings response coefficients. Similarly, McMullen, (1996), finds that companies with an audit committee are less likely to experience errors, irregularities and other indicators of unreliable financial reporting.

2.2 Description of the Existing Egyptian audit committee Governance

The Ministry of Investment and the General Authority for Investment and free Zones introduced the Egyptian Code of Corporate Governance (ECCG), written in Arabic. It primarily applies to joint-stock companies listed on the stock exchange, and companies that use the banking systems as a major source of finance. The code's recommendations are held similar to the CG principles, issued by the OECD and a number of countries including South Africa, Malaysia and the Philippines. However, they are not mandatory, they just add to legislation. They rather promote and control responsible and transparent attitude in managing corporations according to international best practices.

The Egyptian code of corporate governance involves a set of guidelines and standards related to the audit committee characteristics. As stated by the Egyptian code of corporate governance *"An audit committee to be set up comprising at least three non-executive board members. At least one of its members should have financial and accounting expertise. Audit committee should meet periodically at least on quarterly basis. The meeting should have a specific agenda."*

The occurrence of the Enron, WorldCom, and other accounting frauds influenced the US Congress to enact the Sarbanes-Oxley Act (SOX) (see Hamilton and Trautmann, 2002) containing specific provisions regarding audit committees. The following year, 2003, the SEC issued more strict regulations for audit committees of publicly traded companies.

Researchers and commentators have argued that many Audit Committee members lack critical attributes such as independence, expertise and experience in oversight (Vicknair et al.1993, DeZoort 1997, Cohen et al.2002, Guy and Zeff 2002). That is why we are going to focus in this research on these attributes, together with audit committee meetings and size.

Starting with the **audit committee independence**, it is already mentioned in the previous section that the first two recommendations of the BRC 1999, promoted independent audit committees. In this regard, it is expected that the larger the proportion of the audit committee is of independent outside directors, the more this committee will be able to monitor the firm's financial performance effectively. Such a committee is considered to be active, well-functioning, and well-structured (Xie, et al, 2001 and Menon and Williams, 1994).

Vicknair et al, (1993) strengthened this expectation by stating that in order to function effectively, audit committees must be independent of the management as it allows both the internal and external auditors to remain free of undue influences and interferences from corporate executives. Also, in 1999 the Securities and Exchange Commission (SEC) adopted rules requiring that audit committees consist entirely of independent directors, accordingly, it is commonly expected that independent audit committee directors would ensure better financial reporting. This expectation is generally supported by existing empirical evidence (Abbott et al, 2000, Beasley et al, 2000).

Similarly, Klein, (2002) shows that independent audit committees reduce the likelihood of earnings by management and thus improve transparency. Moreover, when examining the link between board committee structure and firm performance, Klein,(1998), reported that the independence of key board committees is related to firm value.

Next, **the audit committee financial expertise**, which was also stated by the BRC 1999 as the third recommendation, refers to the number of or the extent to which members of the audit committee have financial experience. Obviously, it is important for audit committee members to comprise directors who are competent and experienced in financial aspects, mainly because an audit committee is primarily formed with the aim of monitoring the financial reporting process of an organization (Rashidah and Fairuzana, 2006). Major studies and literature strongly support this; examples follow; SEC 1999 require that every audit committee includes at least one member with financial expertise. DeZoort and Salterio, (2001)argue that the audit committee's financial expertise increases the likelihood that detected material misstatements will be communicated to the audit committee and corrected in a timely fashion. Further, DeZoort et al, (2003, a, b) found that more experienced audit committee members and those audit committee members who were CPAs are more supportive of the external auditor. Also, the Blue Ribbon Panel argues that audit committee members should be financially sophisticated; otherwise the audit committee may indeed be largely ceremonial. An audit committee that has members with some financial and/or corporate background would better serve as a financial monitor.

The third issue is **the audit committee meetings**, which refers to the frequency by which the committee meets together. It is expected that more active audit committees that meets often will be more effective monitors. An audit committee that rarely meets (considered inactive) may be less likely to monitor management effectively. The average number of audit committee meetings refers to the level of audit committee activity (Xie et al, 2001; Menon and Williams, 1994).

The BRC 1999 recommends that audit committees meet at least once quarterly and discuss financial reporting quality with the external auditor. Also, Vafeas, (1999) concluded that board activity is an important dimension of board operations and reports that meeting frequency is related to ownership structure and firm valuation. Bedrad et al ,(2004) stated that in order for the audit committee to carry out its function of control it must maintain a certain level of activity through increased frequency of meetings. Reinforced by (Beasley et al,2000), when associating the frequency of audit committee meetings with the likelihood of financial statement fraud, the study concluded that companies having fewer audit committee meetings are usually involved in fraud.

Finally, regarding the **audit committee size**, encouraged by the BRC 1999, the SEC 1999, mandates that audit committees consist of a minimum of three directors.

3. Hypothesis development

A board of directors, mainly in large, complex organizations, would be more effective if definite responsibilities were to be distributed among committees of the board. Among these committees, the Cadbury Report (1992) has focused particularly on the importance of the audit committee. Further, in September 1998 in the US, the *Wall Street Journal* reported that in the previous year, some accounting irregularities were discovered that necessitated the restatement of earnings of companies concerned. This event inspired interest in the effectiveness of audit committees as part of scheme of structures of corporate governance. The argument has been highly developed that perhaps the audit committee is the most reliable entity to protect public interest. Besides recommending the establishment of audit committees, the Cadbury Commission also suggested that audit committees should be composed of at least three members who should be solely NEDs. This feeds into the independence of such committees. Thus, it is posited that in an ideal case a strictly independent audit committee should consist of solely NEDs and non-affiliates of the company (directors who have previously worked in the company).

The Audit committee thus, is considered to be an additional internal governance mechanism whose impact is to improve the quality of financial management of a company and hence its performance. In this respect, an audit committee has three main characteristics that should be considered, these are; audit committee independence, audit committee size, and audit committee meetings. The Hempel Committee Report emphasized the importance of committees and independent directors, and suggested that a company's nominating, compensation and audit committees should be composed largely of independent directors (Pass, 2004).Knowing the importance of committees and their contribution to organizations, Bhagat and Black (2002) declared that failing to practically prove the impact of board independence on firm performance is mainly due to the inadequate embedding of independent directors in board committees. The Nortel failure illustrates the consequences of ineffective audit committees, where independent directors lacked understanding of due diligence, and yet the audit committee failed in its duties to oversee the internal and external audit processes (Thain, 2004).Brown and Caylor (2004) found that solely independent audit committees and dividend yield are positively related. The author however, didn't depict any relationship between audit committee independence and operating performance or firm valuation. Results from Uzun et al. (2004) showed that a higher degree of audit committee independence was associated with a lower likelihood of fraud. Based on the literature, it would seem that the audit committee serves primarily to reduce agency cost, and thereby improving the net performance of the firm.

In this research, we consider the size of the audit committee (as a variable which takes a value of 1 if audit committee consists of at least 3 members, 0 otherwise.), its independence (audit committee will be measured as a variable which takes a value of 1 if all audit committee members are independent, 0 otherwise.), financial expertise will be measured (audit committee financial expertise will be measured as a proportion of audit committee members with financial expertise over the total number of audit committee members.), and audit committee meetings (measured by the number of meetings held per year). As concluded from previous studies, it is expected that the audit committee size is positively related to firm performance, as well as both audit committee independence and number of meetings per year would have a positive correlation with firm performance. Accordingly, the following hypotheses will be tested:

H1: audit committee size has a positive relationship with firm performance.

H2: audit committee financial expertise has positive relationship with firm performance.

H3: the frequency of audit committee meetings has a positive relationship with performance.

H4: Greater independence of the audit committee is associated with higher firm performance.

4. Conceptual framework

This section will explore various audit committee characteristics that are expected to have an effect on firm financial performance based on the literature review and the hypothesis development that was illustrated earlier. Figure 1 presents the conceptual framework of this study. On the left hand-side, there are the listed audit committee characteristics; namely, Audit committee size, audit committee independence, audit committee financial expertise and audit committee meeting frequency. These variables are related to the firm performance, shown on the right hand side, which is measured by return on equity, return on assets and Tobin’s q. The relationship between board characteristics and the firm performance is controlled by firm size, firm age and firm leverage.

Independent variables

Audit Committee:

- Audit committee size
- Audit committee independence
- Audit committee financial expertise
- Audit committee meeting frequency

Dependant

Firm Performance

1. Return on equity
2. Tobin’s Q
3. Return on assets

Control variables

4. Firm size
5. Firm age
6. Firm leverage

5. Research Methodology

This research applies the GLS random effect regression over the nine year test period which test for the existence of the proposed relationship between audit committee characteristics and firm performance. Statistical analysis of the data is then performed using the computer Software, STATA. This package provides a platform where both univariate and multivariate testing methods can be applied to the research design utilised by this study.

Descriptive statistics are used to organize, summarize and describe measures of a sample and also to confirm that no predictions or inferences are made regarding the population parameters. The study used the statistical correlation as a measure of association in this research to test the association between independent and dependent factors. Pearson correlation techniques are widely used as measurements of the direction and strength of association between pairs of variables.

The proposed regression model is defined by the following equation.

$$PERF_{it} = \beta_{0it} + \beta_1 ACSIZE_{it} + \beta_2 ACINDEP_{it} + \beta_3 ACFINEXP_{it} + \beta_4 ACMEET_{it} + \beta_5 FSIZE_{it} + \beta_6 FAGE_{it} + \beta_7 FLEV_{it} + \mu_{it}$$

Where $PERF_{it}$ is a measure of performance taken as *ROA, ROE and Tobin's Q* for firm *i* at time *t* and $\mu_{i,t}$ is the error term.

Where:

$ACSIZE_{it}$ is Audit committee size for firm *i* at time *t*

$ACINDEP_{it}$ is Audit committee independence for firm *i* at time *t*

$ACFINEXP_{it}$ is Audit committee financial expertise for firm *i* at time *t*

$ACMEET_{it}$ is Audit committee meeting frequency for firm *i* at time *t*

$FSIZE_{it}$ is Firm size for firm *i* at time *t*

$FAGE_{it}$ is Firm age for firm *i* at time *t*

$FLEV_{it}$ is Firm leverage for firm *i* at time *t*

The following table explains and summarizes the variables used in this study, definition of each variable and the measurement of each one.

Table 1: Variables definition

VARIABLES	DEFINITION	MEASUREMENT
Dependant variables		
ROE	Return on equity	Measured as percentage of net income to common equity
Tobin's Q	Tobin's Q	Measured as the market value of equity capital and the book value of firm's debt divided by the book value of total assets
ROA	Return on assets	Measured as percentage of net income to total assets
Independent variables		
ACSIZE	Audit committee size	1 if audit committee consist of at least 3 members,0 otherwise
ACINDEP	Audit committee independence	1 if all audit committee members are independent,0 otherwise
ACFINEXP	Audit committee financial expertise	proportion of audit committee members with financial expertise over the total number of audit committee members
ACMEET	Audit committee meeting frequency	Number of meetings held
Control variables		
FSIZE	Firm size	The total assets owned by the firm, measured as the natural logarithm of total assets
FAGE	Firm age	Measured as the number of years since its incorporation in its logarithm
FLEV	Firm leverage	Measured as percentage of total debt to total assets

5.1 Sample selection

This study covers a time period of nine years from 2004 to 2012, this time period were selected because this study uses the Egyptian code of corporate governance (2004) as a guide for corporate governance variables and this code has been effective since 2004, thus this study will reflect the impact of the recent developments in the corporate governance in Egypt on corporate performance from 2004 which is considered the year of issuance of the Egyptian code of corporate governance till 2012.

The sample used in the study is based on the 50 most active Egyptian companies listed in the Egyptian stock market; these companies are considered the best reflection for the Egyptian market. The study is restricted to listed firms because of the assumption that listed firms adhere to the rules and standards set by regulatory bodies in the course of their business activities, plus listed firms are expected to prepare and publish their financial information in compliance with the accounting practice. Furthermore, targeting the most active 50 companies ensures both statistical power in the tests and maximum data availability. These companies cover about 15 industries; where, banks, and financial institutions are omitted as this sector has particular governance issues which make it different from all other sectors (Faccio and Lasfer 2000). Firms' samples covered industries like Building material and construction, chemicals,

Communication, industrial goods and services and automobiles, Entertainment and tourism, food and beverage, housing and real estate, and information technology. Through doing this, a sample of 56 Egyptian firms was obtained for a period of nine years.

The sample selected represent firms which are considered top enterprises in Egypt, they are likely to have greater potential to attract and employ competent and skilled individuals on the board and in the same way to gain a pay-off from such well-constructed board besides it is expected that these firms have good access to capital and other resources that are necessary not only for survival but also for enhancing their performance.

5.2 Data collection

The data for this study comes from multiple sources of secondary data. The base data comes from the annual disclosure book issued by the Egyptian stock exchange (EGX). This book identifies the most active listed companies in Egypt & contains data on board characteristics, ownership structure, corporate performance & other related variables. This book contains the annual reports of the 50 most active companies listed in Egypt's stock exchange of that year. The annual reports were used in calculating the variables of board characteristics and firm performance. For this research, the disclosure books for years 2004–12 were used. The use of the financial statements of the most active companies is due to data availability & reliability because these are required by law & are issued by the Egyptian capital market authority.

6. Results and discussion

6.1 Descriptive statistics

The descriptive statistics for all variables are presented in Table 2. For the audit committee size, 93.45% of the study sample follows the Egyptian corporate governance recommendation of maintaining at least three directors on the audit committee. Also, the sample shows a high percentage of independence in the audit committee, at around 80% (mean = 79.56%). The average audit committee meetings is about 4 times (mean = 4.27), which is relatively very close to the US figure of 4.53 reported by Xie et al. (2003). This is, however, higher than in Australia on the basis of figures of 2.50 times reported by Davidson et al.(2005). Also, the sample shows a high percentage of financial expertise in the audit committee, at around 46% (mean = 46.44%).

Table 2: descriptive statistics

Variables*	Mean	Std. Dev.	Minimum	Maximum	Skewness	Kurtosis
Audit Committee Size	.9345238	.24761	0	1	-3.513231	13.34279
Audit Committee Independence	.7956349	.4036375	0	1	-1.466309	3.150062
Audit Committee Meetings	4.271825	.8290932	4	11	5.722826	42.061
Audit Committee Financial Expertise	.4644643	.1999744	.25	1	1.382022	4.084626
Firm Size	5.949226	.8511122	4.01	10.23	.7520977	5.406337
Firm Age	.9864421	.2763562	0	1.82	-1.079605	5.916103
Firm Leverage	.421369	.2308449	0	.91	.2139791	1.965962
ROE	.1480357	.192065	-.68	.95	.5246904	6.591458
ROA	.0709325	.1044712	-.55	.41	4.530069	31.64034
Tobin's Q	1.991052	1.813077	.39	17.71	-.9914036	11.48032

*Sample size (n) = 56 firms Time periods (T) = 9

6.2 Correlation analysis

The Pearson correlation is used to measure the correlations amongst the variables of the board of directors, audit committee and firm performance. The correlation coefficients are checked for the presence of high collinearity amongst regressors. Table 3 presents the Pearson correlations and with the ROA; table 4 presents the Pearson correlations with the ROE; and Tobin's Q will be presented in table 5.

From the correlation coefficients shown in table 3, 4 and 5, no high correlation is found amongst the variables. As a result, collinearity does not appear to create a threat to the interpretation of regression coefficients of the independent variables in this model. However, from the Pearson correlation, the highest coefficient is 0.211 between audit committee meetings and the audit committee independence.

Firm size is also positively and significantly correlated with audit committee financial expertise and return on equity. Firm leverage is also positively and significantly correlated with return on equity with coefficients of .221.

Table 3: Pearson correlation coefficients for ROA

Variables	ROA	Audit committee size	Audit committee independence	Audit committee meetings	Audit committee financial expertise	Firm size	Firm age	Firm leverage
ROA	1	-0.19	0.165**	0.050	0.053	0.192**	- 0.165**	-0.097*
Audit committee size		1	0.045	-0.046	0.077*	0.10	0.048	0.002
Audit committee independence			1	0.211**	0.077*	0.049	-0.076*	-0.091*
Audit committee meetings				1	0.340**	0.163**	-0.052	0.113**
Audit committee financial expertise					1	0.173**	0.022	0.199**
Firm size						1	- 0.128**	0.227**
Firm age							1	0.004
Firm leverage								1

* Significant at 0.05 level of significance

** Significant at 0.01 level of significant

Table 4: Pearson correlation coefficients for ROE

Variables	ROE	Audit committee size	Audit committee independence	Audit committee meetings	Audit committee financial expertise	Firm size	Firm age	Firm leverage
ROE	1	0.020	0.066	0.091*	0.344**	0.227**	-0.181**	0.221**
Audit committee size		1	0.045	-0.046	0.077*	0.10	0.048	0.002
Audit committee independence			1	0.211**	0.077*	0.049	-0.076*	-0.091*
Audit committee meetings				1	0.340**	0.163**	-0.052	0.113**
Audit committee financial expertise					1	0.173**	0.022	0.199**
Firm size						1	-0.128**	0.227**
Firm age							1	0.004
Firm leverage								1

* Significant at 0.05 level of significance

** Significant at 0.01 level of significant

Table 5: Pearson correlation coefficients for Tobins'q

Variables	Tobins'q	Audit committee size	Audit committee independence	Audit committee meetings	Audit committee financial expertise	Firm size	Firm age	Firm leverage
Tobins'q	1	-0.240**	0.081*	0.005	0.033	-0.105**	-0.002	0.067
Audit committee size		1	0.045	-0.046	0.077*	0.010	0.048	0.002
Audit committee independence			1	0.211**	0.077*	0.049	-0.076*	-0.091*
Audit committee meetings				1	0.340**	0.163**	-0.052	0.113**
Audit committee financial expertise					1	0.173**	0.022	0.199**
Firm size						1	-0.128**	0.227**
Firm age							1	0.004
Firm leverage								1

* Significant at 0.05 level of significance

** Significant at 0.01 level of significant

6.3 Testing the hypotheses

ROE as a dependent variable

Audit committee characteristics (independent variables) have been regressed against the ROE (dependent variable). The adjusted R square for this model is equal to 11.21% which implies that only 11.21% of the variations of ROE are determined by the audit committee characteristics namely; audit committee size, audit committee independence, audit committee financial expertise, and audit committee meetings,; while the remaining 88.79% of variations is attributed to other variables. The Probability of χ^2 showed that the overall model is significant.

Inconsistent with the first hypothesis specifically H1 that states there is a positive relationship between the audit committee size and firm financial performance as measured by ROE, the results showed that there is a negative but not significant relationship with ROE; this implies that the audit committee size cannot influence firms' financial performance which supports findings of Mak and Kusnadi (2005) who could not provide any relationship between the size of audit committee and the firm performance in Malaysia and Singapore. This results is different from the previous findings of Coleman (2007) who examines the relationship between audit committee size and firm performance using a sample of 103 listed companies in four different African countries namely; Ghana, Nigeria, Kenya and South Africa in the period 1997-2001 and he finds a positive relationship between audit committee size and firm performance.

Consistent with this study's expectation, audit committee financial expertise results showed a positive significant relationship with ROE which is supported by (Rashidah and Fairuzana, 2006), that reflects that as audit committee financial expertise increase, the firm financial performance will increase, which is acceptable and consistent with the formulated study hypothesis H2.

This study finds that audit committee meetings is positively and significantly associated with ROE, which is consistent with this study's argument, and accepts hypothesis H3. The significant positive association between audit committee meetings and firm performance is similar to the findings of (Carcello et al., 2002, Xie et al., 2003 and Abbot et al., 2004).

Hypothesis H4 predicts that audit committee independence is positively associated with the firm financial performance. The positively signed coefficient and the insignificant relationship showed in the results reject this study's argument and hypothesis. Audit committee independence results is also supported by the study conducted by Sunday (2008) studied the relationship between Audit committee composition and firm performance by using a sample of 20 non-financial listed companies in Nigeria, and he could not provide a significant association between them.

As for the control variable firm size, shows a negative insignificant relationship with ROE, This result opposes claims in prior studies that higher firm performance is associated with larger sized firms. Firm age showed a significant negative relationship, while firm leveraged showed a positive but not significant relationship with ROE.

Table 6: Regression analysis results for ROE

Random-effects GLS regression				
variables	Expected sign	coefficient	Z	p>z
ROE				
Audit committee Char.				
Audit committee size	+	-0.16684	-0.29	0.3875
Audit committee independence	+	0.029670	0.60	0.273
Audit committee financial expertise	+	0.01521	0.15	0.0439
Audit committee meetings	+	0.02524	2.10	0.0175
Control variables				
Firm size	?	-0.01041	-0.82	0.207
Firm age	?	-0.15066	-4.43	0.000
Firm leverage	?	0.05160	1.30	0.097
constant		0.20705	1.75	0.04
Adjusted R-2	11.21%			
Wald chi2	30.71***			

ROA as a dependent variable

Audit committee characteristics (independent variables) have been regressed against the ROA (dependent variable). The adjusted R square for this model is equal to 5.79% which implies that only 5.79% of the variations of ROA are determined by the audit committee characteristics namely, audit committee size, audit committee independence, audit committee financial expertise, and audit committee meetings,; while the remaining 94.21% of variations is attributed to other variables. The Probability of χ^2 showed that the overall model is significant.

Inconsistent with this study's expectation audit committee size results showed a negative significant relationship with ROA which means that as the number of members serving in the audit committee increase the firm performance decrease. The result is different from that conducted by Kyereboah-Coleman (2007) which stated that there is a positive relationship between audit committee size and firm performance.

Hypothesis H2 predicts that audit committee financial expertise is positively associated with the firm financial performance. The positively signed coefficient but insignificant relationship showed in the results rejects this study's argument and hypothesis. This implies that the extent to which members of the audit committee have financial experience cannot influence firms' financial performance.

This study finds that audit committee meetings are positively but insignificantly associated with ROA, which is inconsistent with this study's argument, and rejects hypothesis H3 which is different from the ROE findings where a significant positive relationship was found.

Consistent with hypothesis H4 that states there is a positive relationship between the audit committee independence and firm financial performance as measured by ROA, the results showed that there is a positive significant relationship with ROA; this implies that the audit committee independence positively influence firms' financial performance which supports findings of Vicknair et al, (1993).

As for the control variables, firm size showed a similar result to that of ROE; which is a negative insignificant relationship with ROA. Firm age showed a significant negative relationship which is also similar to that of ROE; while, firm leverage showed a negative significant relationship with ROA.

Table 7: Regression analysis results for ROA

Random-effects GLS regression				
variables	Expected sign	coefficient	Z	p>z
ROA				
Audit committee Char.				
Audit committee size	+	-0.020558	-0.62	0.0267
Audit committee independence	+	0.040785	1.36	0.0187
Audit committee financial expertise	+	0.011706	0.19	0.423
Audit committee meetings	+	-0.002461	-0.38	0.3515
Control variables				
Firm size	?	-0.001147	-0.16	0.4345
Firm age	?	-0.05625	-3.04	0.002
Firm leverage	?	-0.04254	-1.99	0.0235
constant		0.13989	2.07	0.019
Adjusted R-2	5.79%			
Wald chi2	15.63**			

Tobin's Q as a dependent variable

Audit committee characteristics (independent variables) have been regressed against the Tobin's Q (dependent variable). The adjusted R square for this model is equal to 6.18% which implies that only 6.18% of the variations of Tobin's Q are determined by the audit committee characteristics namely, audit committee size, audit committee independence, audit committee financial expertise, and audit committee meetings; while the remaining 93.82% of variations is attributed to other variables. The Probability of chi² showed that the overall model is significant.

Hypothesis H1 predicts that audit committee size is positively associated with the firm financial performance. Similar to the ROA results the study finds a negative significant relationship between audit committee size and Tobin's q. The negative signed coefficient showed in the results rejects this study's argument and hypothesis.

Inconsistent with this study's expectation audit committee financial expertise showed a positive but insignificant relationship with Tobin's q. The positively signed coefficient but insignificant relationship showed in the results rejects this study's argument and hypothesis H2.

This study finds that audit committee meetings are positively but insignificantly associated with Tobin's Q, which is inconsistent with this study's argument, and rejects hypothesis H3 which is similar to the ROA findings but different from the ROE findings where a significant positive relationship was found.

Also similar to the ROA results and Consistent with hypothesis H4 that states there is a positive relationship between the audit committee independence and firm financial performance as measured by Tobin's Q, the results showed that there is a positive significant relationship with Tobin's Q; this implies that the audit committee independence positively influence firms' financial performance.

As for the control variables, firm size, shows a negative insignificant relationship. Firm age showed a significant negative relationship, while firm leveraged showed a positive but not significant relationship with Tobin's Q.

Table 8: Regression analysis results for Tobin's Q

Random-effects GLS regression				
variables	Expected sign	coefficient	Z	p>z
Tobin's Q				
Audit committee Char.				
Audit committee size	+	-1.0935	-1.86	0.0315
Audit committee independence	+	0.47001	0.96	0.0167
Audit committee financial expertise	+	-0.4240	-0.43	0.3345
Audit committee meetings	+	-0.0554	-0.45	0.3255
Control variables				
Firm size	?	-0.17291	-1.33	0.0915
Firm age	?	-0.9876	-2.85	0.004
Firm leverage	?	0.3442	0.85	0.1985
constant		4.8831	4.09	0.000
Adjusted R-2	6.18%			
Wald chi2	17.50**			

7. Conclusion

The overall aim of this research is to advance an understanding of the relationship between the audit committee characteristics and the firm performance represented by the ROA, ROE and Tobin's Q.

Inconsistent with the first hypothesis specifically H1 that states there is a positive relationship between the audit committee size and firm financial performance as measured by ROE, ROA and Tobin's Q, the results showed that there is a negative but not significant relationship with ROE, ROA and Tobin's Q; this implies that the audit committee size cannot influence firms' financial performance

consistent with this study's expectation, audit committee financial expertise results showed a positive significant relationship with ROE, ROA, and Tobin's Q which is supported by (Rashidah and Fairuzana, 2006), that reflects that as audit committee financial expertise increase, the firm financial performance will increase, which is acceptable and consistent with the formulated study hypothesis H2.

This study finds that audit committee meetings is positively and significantly associated with ROE, positive insignificant with ROA and Tobin's Q, which is consistent with this study's argument, and accepts hypothesis H3.

Hypothesis H4 predicts that audit committee independence is positively associated with the firm financial performance. The positively signed coefficient and the insignificant relationship with ROE, and significant with ROA and Tobin's Q showed in the results reject this study's argument and hypothesis.

As for the control variable firm size, shows a negative insignificant relationship with ROE, ROA, and Tobin's Q. This result opposes claims in prior studies that higher firm performance is associated with larger sized firms. Firm age showed a significant negative relationship, while firm leveraged showed a positive but not significant relationship with ROE, ROA and Tobin's Q.

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References

- Abdullah, S. (2004). Board Composition, CEO Duality and Performance among Malaysian Listed Companies. *Corporate Governance*, 4 (4), 47-61.
- Adam, R. B., & Mehran, H. (2003). Is Corporate Governance Different for Bank Holding Companies? *Economic Policy Review – Federal Reserve Bank of New York*, 9(1), 123–142.
- Agrawal, A. and Knoeber, C.R. (1996), “Firm performance and mechanisms to control agency problems between managers and shareholders”, *Journal of Financial and Quantitative Analysis*, Vol. 31, pp. 377-97.
- Al Farooque, O., Van Zijl, T., Dunstan, K., and Karim, A. (2007). "Corporate Governance in Bangladesh: Link between Ownership and Financial Performance", *Corporate Governance: An International Review*, Vol. 15, No. 6, pp. 1453-1468.
- Anderson, C. A., & Anthony, R. N. (1986). *The new corporate directors*. New York: Wiley.
- Baliga, B., Moyer, N., and Rao, R. (1996). "CEO duality and firm performance: What's the fuss", *Strategic Management Journal*, Vol. 17, No. 1, pp. 41–53.
- Barnhart, S.W. and Rosenstein, S. (1998), “Board composition, managerial ownership, and firm performance: an empirical analysis”, *The Financial Review*, Vol. 33 No. 4, pp. 1-16.
- Barnhart, S.W., Marr, M.W. and Rosenstein, S. (1994), “Firm performance and board composition: some new evidence”, *Managerial and Decision Economics*, Vol. 15 No. 4, pp. 329-40.
- Baums, T. 1994 “Corporate governance in harmony-system & Recent Developments” in M. Issakson & R. Skog (eds) *Aspects of corporate Governance*, Stockholm: Jurist
- Baysinger, B. D., & Hoskisson, R. E. (1990). The composition of boards of directors and strategic control: Effects on corporate strategy. *Academy of Management Review*, 15(1), 72–87.
- Baysinger, B.D. and Butler, H.N. (1985), “Corporate governance and the board of directors: performance effects of changes in board composition”, *Journal of Law, Economics and Organization*, Vol. 1, pp. 101-24.
- Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Lapedes, P. D. (2000). Fraudulent Financial Reporting: Consideration of Industry Traits and Corporate Governance Mechanisms. *Accounting Horizons*, 14(4), 441–454.
- Bebchuk, L. A., Fried, J. M., & Walker, D. I. (2002). Managerial Power and Rent Extraction in the Design of Executive Compensation. *University of Chicago Law Review*, 69(3), 751–846.
- Becht, M. (1997), Strong block holders, weak owners and the need for European mandatory disclosure, *European Corporate Governance Network, Executive Report*, October.
- Becht, M., Bolton, P., & Roell, A. (2005). *Corporate Governance and Control*. European Corporate Governance Institute. ECGI Working Paper Series in Finance

No. 02/2002, Updated August 2005.

- Berle, A.A. and Means, G.C. (1932), *The Modern Corporation and Private Property*, Macmillan, New York, NY.
- Bhagat, S. and Black, B. (2002), "The non-correlation between board independence and long-term firm performance", *Journal of Corporate Law*, Vol. 27, pp. 231-73.
- Boyd, B.K. (1995), "CEO duality and firm performance: a contingency model", *Strategic Management Journal*, Vol. 16 No. 4, pp. 301-12.
- Daily, C.M. and Dalton, D.R. (1997a), "Separate, but not independent: board leadership structure in large corporations", *Corporate Governance: An International Review*, Vol. 5 No. 3, pp. 126-36.
- Brickley, J. A., Lease, R. C. and Smith, C. W. (1988) *Ownership Structure and Voting on Antitakeover Amendments*, *Journal of Financial Economics*, 20, 267–292.
- Brown, L.D. and Caylor, M.L. (2004), *The Correlation Between Corporate Governance and Company Performance*, research study commissioned by Institutional Shareholder Services, Inc, available at: www.bermanesq.com/pdf/ISSGovernanceStudy04.pdf
- Byrne, J. A. (1996, November 25). *The National Association of Corporate Directors' New Guidelines Won't Tolerate Inattentive, Passive, Uninformed Board Members*. Business week. New York.
- Carcello, J., Hermanson, D. and Neal, T. (2002), "Disclosures in audit committee charters and reports", *Accounting Horizons*, Vol. 16 No. 4, pp. 291-304.
- Carlsson, R. H. (2001). *Ownership and Value Creation: Strategic Corporate Governance in the New Economy*. Chichester, England: John Wiley & Sons.
- Charan, R. (1998). *Boards at Work. How Corporate Boards Create Competitive Advantage*. San Francisco, CA: Jossey-Bass Publishers.
- Cho, M. H. (1998). *Ownership Structure, Investment and the Corporate Value: An Empirical Analysis*. *Journal of Financial Economics*, 47(1), 103-121.
- Chung, K. H., & Pruitt, S. W. (1996). *Executive Ownership, Corporate Value and Executive Compensation: A Unifying Framework*. *Journal of Banking and Finance*, 20(7), 1135–1159.
- Coleman, A. and Biekpe, N (2007). "On the Determinants of Board Size and its Composition: Additional Evidence from Ghana", *Journal of Accounting and Organizational Change*, Vol.3, No.1, pp.68-77.
- Coleman, A., Adjasi, C. and Abor, J. (2007). "Corporate governance and firm performance: Evidence from Ghanaian listed companies", *Corporate Ownership and Control*, Vol. 4, No. 2, pp. 123-132.
- Coles, J. L., Daniel, N. D., & Naveen, L. (2008). *Boards: Does One Size Fit All?* *Journal of Financial Economics*, 87(2), 329-356.
- Coles, J.W., McWilliams, V.B. and Sen, N. (2001), "An examination of the relationships of governance mechanisms to performance", *Journal of Management*, Vol. 27 No. 1, pp. 23-50.
- Conger, J. A., Finegold, D., & Lawler III, E. E. (1998, January-February). *Appraising Boardroom Performance*. *Harvard Business Review*, 76(1), 136–148.
- Core, J. E., Holthausen, R. W., & Larcker, D. F. (1999). *Corporate Governance, Chief Executive Officer Compensation, and Firm Performance*. *Journal of Financial*

- Economics, 51(3), 371–406.
- Core, J., Holthausen, R., & Larcker, D. 1999. Corporate governance, chief executive officer compensation, and firm performance. *Journal of Financial Economics*, 51: 371–406.
 - Cotter, J., Shivdasani, A. and Zenner, M. (1997), “Do independent directors enhance target shareholder wealth during tender offers”, *Journal of Financial Economics*, Vol. 43 No. 1, pp. 195-218.
 - Daily, C.M. and Dalton, D.R. (1997b), “CEO and board chair roles held jointly or separately: much ado about nothing?”, *Academy of Management Executive*, Vol. 11 No. 3, pp. 11-20
 - Dalton, D. R., C. M. Daily, J. L. Johnson, and A. E. Ellstrand (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal* 42: 674-686.
 - Dalton, D.R., Certo, S. T., & Roengpitya, R. (2003). Meta-Analysis of Financial Performance and Equity: Fusion or Confusion? *Academy of Management Journal*, 46(1), 13–26.
 - Dalton, D.R., Daily, C.M., Ellstrand, A.E. and Johnson, J.L. (1998), “Meta-analytic reviews of board composition, leadership structure, and financial performance”, *Strategic Management Journal*, Vol. 19 No. 3, pp. 269-90.
 - Davidson, W.N. III, T. Pilger, and A. Szakmary (1998). Golden parachutes, board and committee composition, and shareholder wealth. *Financial Review* 33: 17-32.
 - Davies, A. (1999). *A Strategic Approach to Corporate Governance*. London: Gower Press.
 - Davis, J. H., Schoorman, F. D., & Donaldson, L. (1997). Toward a Stewardship Theory of Management. *Academy of Management Review*, 22(1), 20–47.
 - DeAngelo, H., DeAngelo, L., 1985, Managerial ownership of voting rights: A study of public corporations with dual classes of common stock, *Journal of Financial Economics* 14, 33-69.
 - Demsetz, H. & Lehn, K. 1985. The structure of corporate ownership: Causes and consequences. *Journal of Political Economy*, 93: 1155–1177.
 - Dickins, D. and O’Reilly, D. (2009), “The qualifications and independence of internal auditors”, *Internal Auditing*, Vol. 24 No. 3, pp. 14-21.
 - Donaldson, L. & Davis, J. H. 1991. Returns. *Australian Journal of Management*, 16: 49–64.
 - Ehikioya, I. (2007).”Board composition, managerial ownership, and firm performance: An empirical analysis”. *The Financial Review*, Vol. 33, No. 1, pp.1-16.
 - Eisenberg, T., Sundgren, S. and Wells, M.T. (1998), “Larger board size and decreasing firm value in small firms”, *Journal of Financial Economics*, Vol. 48 No. 1, pp. 35-54.
 - Elson, C. M. (1996) Director Compensation and the Management-Captured Board: the History of a Symptom and a Cure. *SMU Law Review*, 50(1), 127–140.
 - Fama, E. (1980), ‘Agency problems and the theory of the firm,’ *Journal of Political Economy*, 88: 288-307.
 - Fama, E.F. and Jensen, M.C. (1983), “Separation of ownership and control”, *Journal of Law & Economics*, Vol. 26 No. 2, pp. 301-25.

- Finkelstein, S. and D'Aveni, R.A. (1994), "CEO duality as a double-edged sword: how boards of directors balance entrenchment avoidance and unity of command", *Academy of Management Journal*, Vol. 37 No. 5, pp. 1079-108.
- Fooladi, M (2012). "Concentration of ownership in Iranian Listed Firms". *International Journal of Social Science and Humanity*, Vol. 2, No. 2, pp. 112-116.
- Forsberg, R. (1989). "Outside directors and managerial monitoring". *Akron Business and Economic Review*, Vol. 20, pp. 24–32.
- Ghosh, S. (2006). "Do board characteristics affect corporate performance? Firm-level evidence for India". *Applied Economics Letters*, Vol. 13, pp. 435-443.
- Gompers, A., Ishii, J.L. and Metrick, A. (2003), "Corporate governance and equity prices", *Quarterly Journal of Economics*, Vol. 118 No. 1, pp. 107-55.
- Goyal, V. K, & Park, V. (2002). Board Leadership Structure and CEO Turnover. *Journal of Corporate Finance*, 8(1), 49–66.
- Hawkins, J.A. (1997). Why Investors Push for Strong Corporate Boards. *McKinsey Quarterly*, 3, 144-148.
- Hermalin, B. and M. Weisbach, 1988, "The Determinants of Board Composition," *The RAND Journal of Economics* 19, 589-606.
- Hermalin, B. E., & Weisbach, M. S. (2003). Boards of Directors as an Endogenously Determined Institution: A Survey of the Economic Literature. *Economic Policy Review – Federal Reserve Bank of New York*, 9(1), 7–26.
- Hermalin, B.E. and Weisbach, M.S. (1991), "The effects of board composition and direct incentives on firm performance", *Financial Management*, Vol. 20 No. 4, pp. 101-12.
- Hill, C.W.L. and Snell, S.A. (1988), "External control, corporate strategy, and firm performance in research-intensive industries", *Strategic Management Journal*, Vol. 32 No. 1, pp. 577-90.
- Hillman, A. J., & Dalziel, T. (2003). Boards of Directors and Firm Performance: Integrating Agency and Resource Dependency Perspectives. *Academy of Management Review*, 28(3), 383–396.
- Jensen, M. C., & Murphy, K. (1990). Performance Pay and Top-Management Incentives. *Journal of Political Economy*, 98(2), 225 – 264.
- Hillman, A. J., Canella, A. A., & Paetzold, R. L. (2000). The Resource Dependency Role of Corporate Directors: Strategic Adaptation of Board Composition in Response to Environmental Change. *Journal of Management Studies*, 37(2), 235–255.
- Jensen, M. (1993), "The modern industrial revolution, exit, and the failure of internal control systems", *Journal of Finance*, Vol. 48 No. 3, pp. 831-80.
- Jensen, M.C. and Meckling, W. (1976), "Theory of the firm: managerial behavior, agency cost and ownership structure", *Journal of Financial Economics*, Vol. 3, pp. 305-60.
- John, K. and Senbet, L. (1998), "Corporate governance and board effectiveness", *Journal of Banking and Finance*, Vol. 22, pp. 371-403.
- Karamanou, I., and Vafeas, N. The Association between Corporate Boards, Audit Committees, and Management Earnings Forecasts: An Empirical Analysis, *Journal of Accounting Research* Vol. 43 No. 3 June 2005

- Shijun Cheng, Board size and the variability of corporate performance, *Journal of Financial Economics* Volume 87, Issue 1, January 2008, Pages 157–176
- Kemp, S. (2006). In the Driver's Seat or Rubber Stamp? The Role of the Board in Providing Strategic Guidance in Australian Boardrooms. *Management Decision*, 44(1), 56–73.
- Kirsten L. Anderson, Daniel N. Deli and Stuart L. Gillan. (2003), Boards of Directors, Audit Committees, and the Information Content of Earnings, working paper series, johnL. weinberg center for corporate governance, university of Delaware.
- Klein A. Firm performance and board committee structure. *Journal of Law and Economics* XLI 1998:275–303.
- La Porta, R., López-de-Silanes, F., Shleifer, A. and Vishny, R. (1997) Legal determinants of external finance, *Journal of Finance*, 52:1131–50.
- Lawler III, E. E., Finegold, D. L., Benson, G. S., & Conger, J. A. (2002). Corporate Boards: Keys to Effectiveness. *Organisational Dynamics*, 30(4), 310–324.
- Lechem, B. (2002). *Chairman of the Board: A Practical Guide*. New Jersey: John Wiley & Sons, Inc.
- Leighton, D. S. R., & Thain, D. H. (1993). Selecting New Directors. *Business Quarterly*, 57(4), 16–26.
- Letendre, L. (2004). The Dynamics of the Boardroom. *Academy of Management Executive*, 18(1), 101–104.
- Lipton, M. and Lorsch, J.W. (1992), "A modest proposal for improved corporate governance", *The Business Lawyer*, Vol. 48 No. 1, pp. 59-77.
- Loderer, C., & Martin, K. (1997). Executive Stock Ownership and Performance: Tracking Faint Traces. *Journal of Financial Economics*, 45(2), 223-255.
- Lorsch, J. W., & MacIver, E. (1989). *Pawns or Potentates: The Reality of America's Corporate Boards*. Boston: Harvard University Press.
- Mallin, C. (2007), 'Corporate Governance - 2nd Edition', New York: Oxford University Press.
- Mangena, M. and Taurigana, V. (2008). "A study of the relationship between audit committee factors and voluntary external auditor involvement in UK interim reporting", *International Journal of Auditing*, Vol. 12, No. 1, pp. 43-63.
- McGregor, D. (1967). *The Professional Manager*. New York: McGraw-Hill.
- Morck, R., Shleifer A. and Vishny, R. (1988) Management ownership and market valuation: An empirical analysis, *Journal of Financial Economics*, 20: 293–315.
- O'Reilly III, C. A., Caldwell, D. F., & Barnett, W. P. (1989). Work Group Demography, Social Integration, and Turnover. *Administrative Science Quarterly*, 34(1), 21-37.
- Palia, D., & Lichtenberg, F. (1999). Managerial Ownership and Firm Performance: A Re-examination Using Productivity Measurement. *Journal of Corporate Finance*, 5(4), 323–339.
- Pfeffer, J. (1973), "Size, composition and function of corporate boards of directors: the organisation-environment linkage", *Administrative Science Quarterly*, Vol. 18, pp. 349-64.
- Pfeffer, J. and Salancik, G.R. (1978), *the External Control of Organisations: A*

- Resource-Dependence Perspective, Harper & Row, New York, NY.
- Rashid, A., Zoysa, A., Lodh, S. and Rudkin, K. (2010). "Board Composition and Firm Performance: Evidence from Bangladesh". *Australasian Accounting Business and Finance Journal*, Vol. 4, No. 10, pp. 76- 95.
 - Rechner, P.L. and Dalton, D.R. (1991), "CEO duality and organisational performance: a longitudinal analysis", *Strategic Management Journal*, Vol. 12, pp. 155-60.
 - Rhoades, D.L., Rechner, P.L. and Sundaramurthy, C. (2001), "A meta-analysis of board leadership structure and financial performance: are two heads better than one?", *Corporate Governance: An International Review*, Vol. 9 No. 4, pp. 311-19.
 - Sanda, A., Mikailu, S., and Garba, T. (2005). "Corporate governance mechanisms and firm financial performance in Nigeria". Working Paper No. 149, African Economic Research Consortium AERC, Nairobi, Kenya.
 - Sheu, H. J., & Yang, C. Y. (2005). Insider Ownership Structure and Firm Performance: A productivity Perspective Study in Taiwan's Electronics Industry. *Corporate Governance: An International Review*, 13(2), 326–337.
 - Singh, H. and Newby, R. (2010), "Internal audit and audit fees: further evidence", *Managerial Auditing Journal*, Vol. 25 No. 4, pp. 309-27.
 - Singh, H., & Harianto, F. (1989). Management-Board Relations, Takeover Risk, and the Adoption of Golden Parachutes. *Academy of Management Journal*, 32(1), 7–24.
 - Strickland, D., Wiles, K., & Zenner, M. (1996). A Requiem for the USA: Is Small Shareholder Monitoring Effective? *Journal of Financial Economics*, 40(2), 319–338.
 - Uzun, H., Szewczyk, S. H., & Varma, R. (2004). Board Composition and Corporate Fraud. *Financial Analysts Journal*, 60(3), 33–43.
 - Vafeas, N. (1999). Board Meeting Frequency and Firm Performance. *Journal of Financial Economics*, 53(1), 113–142.
 - Vafeas, N. (2000), "Board structure and the informativeness of earnings", *Journal of Accounting and Public Policy*, Vol. 19 No. 2, pp. 139-60.
 - Vafeas, N. and Theodorou, E. (1998). "The relationship between board structure and firm performance in the UK". *British Accounting Review*, Vol. 30, pp. 383-407.
 - W.A. Reese Jr., M.S. Weisbach Protection of minority shareholder interests, cross-listings in the United States, and subsequent equity offerings / *Journal of Financial Economics* 66 (2002) 65–104.
 - Weir, C.M. and Laing, D. (2000), "The performance-governance relationship: the effects of Cadbury compliance on UK quoted companies", *Journal of Management and Governance*, Vol. 4 No. 4, pp. 265-81.
 - Weisbach, M. S. (1988). Outside director and CEO turnover. *Journal of Financial Economics* 20:431-460.
 - Williamson, O. E. (1996). *The Mechanisms of Governance*. New York: Oxford University Press.
 - Yermack, D. (1996), "Higher market valuation of companies with a small board of directors", *Journal of Financial Economics*, Vol. 40 No. 2, pp. 185-211.
 - Zahra, S. A., & Pearce II, J. A. (1989). Boards of Directors and Corporate Financial Performance: A Review and Integrative Model. *Journal of Management*, 15(2), 291-

334.

- Zahra, S.A. and Pearce, J.A. II (1989), "Board of directors and corporate financial performance: a review and integrative model", *Journal of Management*, Vol. 15, pp. 291-334.