Chapter 1

Audit Committee Effectiveness, Audit Quality, and Internal Control Information Disclosures:

An Empirical Study

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ABSTRACT

This chapter examined the linkages between audit committees' effectiveness, audit quality, and internal control information disclosure. Empirical evidence on the effect of audit committee effectiveness and audit quality on internal control information disclosure is scanty. Using a 210 firm-year sample of firms listed on the Ghana Stock Exchange for the period 2013-2017, the chapter tried to fill the research gap. After controlling for board size, proportion of independent directors, and leverage, the results from univariate and multivariate analyses indicated that effective audit committee and audit firm size play complimentary and substitution roles in ensuring internal control information disclosure. Board size and proportion of independent directors were also found to influence the disclosure of quality voluntary information.

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INTRODUCTION

The purpose of this paper is to investigate the influence of audit committee effectiveness and audit quality on disclosure of internal control information in corporate annual reports. The paper wants to test whether there is a substitute or complementary effect between the presence of Big Four auditor and effective audit committee in influencing disclosure of internal control information.

Establishment of proper corporate governance mechanisms is essential for the optimal application of resources, enhancement of responsiveness, transparency and protecting the rights of the stakeholders (Sun *et al.*, 2010; Grougiou *et al.*, 2014). According to Deumes, (2004) reporting on internal control improves the quality of financial reporting and reduces governance problems. Internal control also helps to ensure that information is reliable and that firms comply with laws and regulations (Beretta et al., 2010; Hunziker, 2013).

Lack of proper attention to proper internal controls could either result in a direct loss of earnings or may result in imposition of constraints on the firm's ability to meet its profit-making objectives. In the wake of recent corporate failures, the necessity of establishing audit committees and engaging quality audit in enhancing quality financial reports has been emphasized. A company that has an effective audit committee will have less likelihood of experiencing problems with internal control (Zhang et al., 2007; Krishnan, 2005). According to Ashbaugh-Skaife et al. (2007), lack of internal control disclosures raises shareholders' uncertainty about the reliability of the reported earnings and appear to elicit a significant negative market reaction. An effective internal control system can prevent large losses (Jaya et. al., 2016). The interaction among corporate governance actors is crucial to the issue of quality financial reports. This study focuses on two of these corporate governance actors, namely audit committee and external auditors. In particular, this study attempts to investigate the nature of relationship between audit committees and external auditor on internal control information disclosure. Zhang et al. (2007) posit that audit committees with financial expertise or accounting expertise have a smaller probability of experiencing internal control issues. Ho and Wong (2001) also argue that the presence of an audit committee influence the level of corporate disclosure. In emerging economies, where corporate governance mechanisms are typically weak to contain agency problems, external auditors provide assurance on the reliability of financial statements of listed companies (Fan and Wong, 2005). This study focused on the audit committee because it is one of the elements responsible for overseeing the interests of shareholders and supervising financial statements. The audit committee should be efficient and provide maximum transparency. This organ of control needs other mechanisms, such as the quality of external auditor, to mitigate annual report manipulation.

Based on the aforementioned and in order to ensure clarity, the main objectives of this paper are:

1. To measure the extent of internal control information disclosure in the listed firms' annual reports;
2. To study the interaction between an effective audit committee and the presence of an external audit function to promote the disclosure of internal control information.

After controlling for board size, proportion of independent directors and leverage, the results from univariate and multivariate analyses indicated that effective audit committee and audit firm size play complimentary and substitution roles in ensuring internal control information disclosure. Board size and proportion of independent directors were also found to influence the disclosure of quality voluntary information.

This study takes a step forward in the academic literature with contribution and implications that are both practical and academic. The study findings contribute to the corporate governance literature by shedding light on the role of external audit, and audit committee characteristics, such as accounting expertise, prior experience, size and number of meetings in the disclosure process. This paper is one of the few to examine the association between audit committee effectiveness and audit quality, and internal control information disclosure.

LITERATURE REVIEW

Audit Committee

The Ghana Corporate Governance guidelines on best practices issued by the Securities and Exchange Commission require all companies to establish audit committees. The audit committee

should comprise at least three directors, the majority of whom should be independent directors and the chairman should be an independent director. For quality presentation and disclosure of financial and non-financial information, companies in Ghana are required to comply with the International Financial Reporting Standards (IFRS) which have been adopted by the Institute of Chartered Accountants Ghana (ICAG).

The audit committee is one of the most important board sub-committees and its main responsibility is to oversee then effectiveness of internal control and financial reporting quality.

Prior research shows that financial experts within the audit committee curb internal control weaknesses (Krishnan, 2005; Zhang *et al.*, 2007) and ensure high financial reporting quality (Abbott *et al.*, 2004; Kang *et al.*, 2011; Lary and Taylor, 2012; Sun *et al.*, 2012).

Empirical evidence shows that audit committees' role is very important because it is responsible for oversight of the financial reporting process (Johl et al., 2012).

Prior studies provide mixed results on the role of audit committee size in ensuring financial reporting quality. While a number of studies found size to be a significant determinant of financial reporting quality (Lin *et al.*, 2006; Cornett *et al.*, 2009), other studies reported insignificant impact on the financial reporting process (Abbott *et al.*, 2004; Bedard *et al.*, 2004; Lary & Taylor, 2012). Alzoubi and Selamat (2012) stated that, audit committees with financial expertise will increase the capability of monitoring and in turn, increases the quality of financial reporting.

Krishnan (2005) provides evidence that an independent and large audit committee reduces the likelihood of material internal control weaknesses.

According to Shah and Butt (2009), the more independent the audit committee is, the higher quality the financial reporting. Razman and Iskandar (2004) conducted a research on Malaysian-listed companies studying the link between financial reporting and audit committee members' academic background. Their results show that high-quality financial reporting comes attached to the extent of how much the members serving on the committee are financially literate.

Bedard et al. (2004) observe that the best way to sustain a company's control function is by increasing the occurrence of audit committee meetings. According to Abbott et al. (2004), the more the audit committee meets and makes sure that its members are doing the job required of them for the best interest of the company, the less the possibility of fraud. Abbott *et al.* (2000) argue that the frequency of audit committee meetings shows their desire to fulfil their responsibilities. Audit committees who hold frequent meetings, despite their busy schedules, emerge as an effective committee in enhancing corporate financial reporting quality (Abbott *et al.*, 2000; Kang *et al.*, 2011).

Audit Quality

Knechel et al. (2013) defined audit quality as execution of a well-designed audit process by properly motivated and trained auditors who understand the inherent uncertainty of the audit and appropriately adjust to the unique conditions of the client. This paper in consonance with prior literature, (e.g. Bepari, & Mollik, 2015) used the size of the audit firm as a proxy for audit quality. It is assumed that Big-4 and non-Big-4 audit firms differ in terms of their audit qualities and enforcement abilities.

The literature suggests that firms with strong corporate governance tend to engage high quality auditors (Big-4 audit firms) and pay larger audit fees (DeFond & Zhang, 2014). Audit quality may also enhance the transparency of a report via higher voluntary disclosure (Barros et al., 2013). Audit firm size is highly associated with a greater level of disclosure, hence it can be hypothesized that audit quality can lead to greater level of internal control disclosure. Ashbaugh-Skaife, et a., (2007) posit that Big-4 audit firms have a reputation to protect and are motivated to perform high quality internal control quality and to ensure that companies disclose weaknesses in internal control.

Audit fees can be defined as the actual cost charged to the company by the auditor in return for their opinion regarding the financial statement of the latter (Coffee, 2005).

Internal Control Disclosure

Effective internal control system represents an adequate assessment of earnings quality and reliable financial reporting (Costello & Wittenberg-Moerman, 2011; Doyle et al., 2007). Internal control can also be viewed as the process put in place by management to provide reasonable assurance regarding the achievement of effective and efficient operations, reliable financial reporting, and compliance with laws and regulations.

In 1978, Cohen Commission (the Commission on Auditors' Responsibilities), (cited in Agyei-Mensah, 2016a), required that management should assess internal control systems. Internal control consists of all of the related methods and measures adopted within an organisation to:

- Safeguard assets from employee theft, robbery, and unauthorized use.
- Enhance the accuracy and reliability of its accounting records by reducing the risk of errors (unintentional mistakes) and irregularities (intentional mistakes and misrepresentations) in the accounting process.

The Committee of Sponsoring Organisations of the Treadway Commission (COSO) also defines internal control as:

A process, effected by an entity's board of directors, management and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories: Effectiveness and efficiency of operations; Reliability of financial reporting; and Compliance with applicable laws and regulations.

Internal control according COSO consists of five interrelated components:

- Control environment
- Risk assessment
- Control activities
- Information and communication
- Monitoring.

Ismail and Rahman, (2011) argue that Information related to corporate governance such as internal control and risk management system could help the companies to fulfill the need of the investors. Verschoor (2002) suggests that the financial scandal of Enron was mainly caused by its weak internal control system. Internal control information has been cited as one of the most important non-financial information items to be included in the corporate reporting domains (Guthrie & Petty, 2000; Abeysekera, 2013). The underlying argument is that internal control resources represent a substantial amount of a firm's market value in the modern economy (Edvinsson, 2013), and therefore, disclosure of internal control information reveals "the 'true' value of a firm by identifying new or hidden relations between various forms of assets" (Liu & Wang, 2012, p. 37). Hermanson (2000) posits that despite importance of internal control investors cannot directly observe it and until the firm discloses it voluntarily, investors will remain unaware of the level and quality of the firm's internal control systems (Deumes & Knechel, 2008; Michelon et al., 2009).

Ashbaugh-Skaife, Collins, and Kinney (2007) find that firms reporting internal control deficiencies have more complex operations, greater exposure to accounting risk, fewer resources to invest in internal control, and a higher likelihood of using a dominant audit firm.

Poor corporate governance and low level of transparency in disclosing information by the companies are some of the reasons to the 1997-1998 Malaysia financial crisis, according to Norwani, Mohamad and Check, (2011).

Relationship Between Audit Committee Effectiveness, Audit Quality, and Internal Control Disclosure

Zhang *et al.* (2007) provide empirical evidence that the audit committee and the external auditor play an important role in reducing internal control weaknesses. Abbot et al. (2004), documented that completely independent and financial expertise of audit committee were positively related with a demand for higher audit quality.

According to Cohen et al., (2004) the interactions between the audit committee, the external auditors and the board of directors are crucial to improve the quality of financial reporting. Thus, supporting the argument that the interactions between effective audit committee and the external auditor will bring about good internal control in organisations.

Mitchell *et al.* (2008) showed that the relation between an audit committee and the quality of audit can potentially enhance the quality of financial statements published to the external stakeholders.

As noted by Xie et al. (2003), the audit committee has the responsibility to oversee ICFR, communicating with management, internal and external auditors, and the board of directors to assure that appropriate controls are in place and reporting processes are effective.

The corporate governance literature suggests that audit committee effectiveness is positively associated with firms' financial reporting quality (Carcello *et al.*, 2006; Klein, 2002) and negatively associated with the incidence of management fraud (Carcello *et al.*, 2009; Abbott *et al.*, 2004). Carcello *et al.* (2006), Abbott *et al.* (2003) declare that the existence of an independent audit committee equipped with financial expertise is positively related with audit quality. Zhang et al. (2007) find that internal control disclosure is negatively associated with audit committee financial expertise, but do not find an association with other audit committee characteristics.

Based on the objectives of the study the following hypotheses would be tested:

H1. Firms with an effective audit committee and a Big Four auditor, are likely to disclose internal control information

H2. Firms with an effective audit committee and disclose audit fee charged, are likely to disclose internal control information

H3. Firms with an effective audit committee and a long auditor tenure are likely to disclose internal control information

Method

The data to be used in the empirical analysis will be derived from the financial statements of all the listed firms on the GSE during a five-year period, 2013-2017. Five years were selected, because these were the latest financial statements. Data for these years were selected because firms' disclosures tend to persist across years (Bushee et al. 2003, Skinner 2003, Graham et al. 2005). Once managers decide to disclose internal control information in the narrative sections of the annual report, it is unlikely that they would switch back to no disclosure.

A disclosure index consisting of eight reportable items were used to measure the extent of voluntary internal control reporting. This internal control disclosure evaluation criteria have been used by Jainfei Leng and Yiran Ding (2011). The Appendix shows the internal control disclosure evaluation criteria used in the study.

In all 210 firm-years reports for the period 2013 - 2017 were used. The annual reports were downloaded from Africanfianncials.com web site. Each annual report was individually examined and coded in order to obtain the disclosure of internal control information. For the purpose of this article, dummy variables are assigned to represent whether or not an item is used, if an item is used 1 is assigned to that item and zero if an item is not used. The values assigned are then summed up to represent the total score for each company. This is mathematically presented as follows:

The disclosure index = Total internal control items disclosed / Maximum (8) items disclosed for each company. This can mathematically be stated as follows:

$$Disclosure\,Index = \frac{Actual\,Disclosure}{Total\,Possible\,Disclosure} = \frac{\sum_{1}^{m} di}{\sum_{1}^{n} di}$$

Where:

d_i = 1 if the item *di* is disclosed (0 if not disclosed)
m = number of items disclosed;
n = maximum number of disclosure items possible

Measurement of Independent Variables

Following prior studies (Sultana, *et al.,* 2015; Ika & Ghazali, 2012; Nelson & Shukeri, 2011; Mohamad-Naimi et al., 2010; Lin et al., 2006; DeZoort et al., 2002) this study uses five audit committee variables best proxying audit committee effectiveness for analysis. These are; audit committee financial expertise, audit committee previous experience, audit committee size, independent audit committee, and audit committee meeting.

Measurement of Effectiveness of Audit Committee

The study model includes audit committee variables such as: ACPE, a dummy variable that is 1 where at least one director of the audit committee has prior audit committee experience and 0 otherwise. Additionally, ACSZ: the number of members forming the audit committee, and ACIND, a dummy variable that is 1 where companies have an independent audit committee, and 0 otherwise. An audit committee is independent when it is formed exclusively by external and independent members. ACFE; it is a dummy variable that takes the value1 if the audit committee includes at least one member with finance expertise in each year during the period 2013-2017, and 0 otherwise. ACMT is a variable that measures the number of meetings of the audit committee.

This study uses three proxy of measurement of audit quality; audit firm size (AUDFSZ), audit fees (AUDFEE), auditor tenure (TENURE). These measures have been used by Zgarni, Hlioui and Zehri (2016); Khlif and Samaha (2016) and Wahab et al. (2011). Furthermore, the study tests the interaction between effectiveness of audit committee and external auditor (ACSCORE×AUDFSZ+ACSCORE×AUD FEE+ACSCORE×TENURE).

- **ACSCORE×AUDFSZ**: It is a variable to measure the interaction of the ACSCORE and AUDFSZ and takes the value 1 if a firm-year observation has an external audit function (Big Four auditor) and an effective audit committee, 0 otherwise.
- **ACSCORE×AUDFEE**: It is a variable to measure the interaction of the ACSCORE and AUDFEE and takes the value 1 if a firm-year observation has disclosed an external audit fee and an effective audit committee, 0 otherwise.
- **ACSCORE×TENURE**: It is a variable to measure the interaction of the ACSCORE and TENURE and takes the value 1 if a firm-year observation has an external audit function (tenure of auditor) and an effective audit committee, 0 otherwise.

Finally, the empirical model of the study also includes four control variables. These control variables are; board size (BDS), profitability (ROA), proportion of independent directors (PNED), and leverage (LEV). Prior studies suggested that these company-specific characteristics may affect the level of internal control information disclosure (Alsaeed, 2006; Celik et al., 2006; Aljifri & Hussainey, 2007; Wang et al., 2008; Hassan et al., 2011; Uyar & Kilic, 2012; Orens et al., 2013; Alkhatib, 2014).

- Board size: Research by Chen and Jaggi, (2000) points out that board composition affects the effectiveness of control on top management increasing the quality of mandatory disclosure.
- Profitability: According Agyei-Mensah (2016b p. 85). There is a general belief that a firm's willingness to disclose information is related to its profitability. Companies of strong profitability have more financial resources

to establish and implement internal control system and are more likely to disclose information (Khlif & Samahak, 2016)

Proportion of independent directors (PNED):

- Leverage: Eng and Mark (2003) and Barako et al. (2006) provide evidence that leverage is positively related to the extent of voluntary disclosure. Xiaowen (2013) on the other hand posits that companies with high leverage are not willing to disclose internal control information.
- Independent directors: Gul and Leung (2004) document a negative relationship between board independence and disclosure. Haniffa and Cooke (2005) found that, board independence improves the quality of disclosures.

A linear-multiple regression analysis will be used to test the interaction between disclosure of internal control information (dependent variable) and effectiveness of audit committee and audit quality (independent variables).

To test the construct validity of the scores of the effectiveness of audit committee (ACSCORE), a factor analysis was performed on the items in their respective measure. The aim of the factor analysis is to limit the whole of the criteria selected to characterize various dimensions of the governance variable in a minimum number of factors. That is, the five individual data items of audit committee; audit committee prior experience, its size, the independence, expertise and the frequency of the meetings of the members of audit committee, were factor analyzed to determine if they loaded onto two factors as expected. Results given in Table 1, in the rotated component matrix, confirm a correct loading into two factors.

Table 1. Factor analysis of items in audit committee effectiveness

Rotated Component Matrix		
	Component	
	1	2
ACFE	.431	.540
ACSZ	.660	.051
ACIND	-.441	.702
ACPE	.733	.055
ACMT	-.129	-.541

Results

Descriptive Statistics

The descriptive statistics for the variables are presented in Table 2. The dependent variable ICID has a mean of 41 per cent, the minimum is 19 per cent, the maximum being 81 per cent with a standard deviation of 21 per cent. According to the results, internal control information disclosure level is not high among listed companies in Ghana. The findings are consistent with that of, Agyei-Mensah (2016), Cheng and Courtenay (2006), Pateli and Prencipe (2007), Lim *et al.* (2007), Donnelly and Mulcahy (2008), Chen and Jaggi (2000) and Fang *et al.* (2009), but is inconsistent with the findings of Eng and Mak (2000).

Univariate Analysis

To meet the requirements of the regression analysis assumptions, the correlation between the study variables and test for multicollinearity problems were examined. Table 3 presents the correlation results for the study variables. The correlation analysis shows that ICID has a significant relationship with AUDITOR at 0.05 level. TENURE has a significant relationship with AUDITSCORE and AUDITFEE at 0.05 level. BDS also has a significant relationship with AUDITOR at 0.01 level. These results indicate the need to pay attention to possible multi-co linearity problem in the regression analysis.

Table 2. Descriptive statistics

Descriptive Statistics				
	Mean	**Std. Deviation**	**Minimum**	**Maximum**
ICID	0.41	0.21	0.19	0.81
ACSCORE	7.02	7.40	0.00	24.00
AUDITOR	0.73	0.37	0.00	1.00
AUDFEE	0.80	0.30	0.00	1.00
TENURE	4.43	1.07	3.00	6.00
BDS	8.60	2.77	4.00	18.00
LEV	0.88	0.57	0.06	2.77
PROF	6.74	8.41	(8.00)	33.00
PNED	70.43	11.90	50.00	88.89
Valid N (listwise)	210			

Table 3. Spearman's rho correlation coefficient matrix

		Correlations								
		ICID	ACSCORE	AUDITOR	AUDFEE	TENURE	BDS	LEV	PROF	PNED
ICID	Correlation Coefficient	1.000								
	Sig. (2-tailed)									
ACSCORE	Correlation Coefficient	.013	1.000							
	Sig. (2-tailed)	.853								
AUDITOR	Correlation Coefficient	.205**	.047	1.000						
	Sig. (2-tailed)	.003	.496							
AUDFEE	Correlation Coefficient	-.080	.032	-.029	1.000					
	Sig. (2-tailed)	.247	.643	.681						
TENURE	Correlation Coefficient	.044	.180**	-.022	-.214**	1.000				
	Sig. (2-tailed)	.523	.009	.755	.002					
BDS	Correlation Coefficient	.180**	.165*	.153*	-.029	-.015	1.000			
	Sig. (2-tailed)	.009	.017	.026	.675	.833				
LEV	Correlation Coefficient	.058	.105	.249**	.027	.051	.026	1.000		
	Sig. (2-tailed)	.401	.129	.000	.694	.459	.706			
PROF	Correlation Coefficient	.100	.044	.248**	-.027	.025	-.029	-.481**	1.000	
	Sig. (2-tailed)	.150	.524	.000	.700	.717	.676	.000		
PNED	Correlation Coefficient	-.277**	-.245**	-.044	.075	-.127	-.153*	.200**	-.090	1.000
	Sig. (2-tailed)	.000	.000	.523	.277	.065	.027	.004	.194	
**. Correlation is significant at the 0.01 level (2-tailed).										
*. Correlation is significant at the 0.05 level (2-tailed).										

Multicollinearity and Autocorrelation Tests (Assessment of the Validity of the Model)

A regression analysis (Table 4) was performed on the dependent and independent variables to check on the existence of the multi-co linearity and serial or autocorrelation problems. The tolerance and Variable Inflation Factor (VIF) tests revealed no

Table 4. Interaction between the effectiveness of audit committee and audit quality on disclosure of internal control information

Regression Analysis Results							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
(Constant)	.508	.141		3.602	.000		
ACSCORE	.004	.004	.141	.892	.037	.471	1.863
AUDITOR	.071	.052	.127	1.349	.179	.484	1.068
AUDFEE	.027	.038	.049	.719	.473	.929	1.077
TENURE	.003	.014	.016	.227	.821	.861	1.162
ACSCORE×AUDFSZ	.003	.005	.088	.526	.060	.511	1.616
ACSCORE×AUDFEE	.031	.039	.056	.795	.427	.847	1.181
ACSCORE×TENURE	.033	.032	.070	1.008	.003	.880	1.136
BDS	.011	.005	.151	2.205	.029	.914	1.094
LEV	.040	.028	.109	1.439	.152	.746	1.341
PROF	.003	.002	.137	1.935	.054	.847	1.181
PNED	-.006	.001	-.319	-4.525	.000	.859	1.164
R2 = 0.555; Adj. R2 = 0.509; F=3.314 (p=0.000), Durbin Watson =1.497; N=210							

harmful correlation. According to (Pallant, 2013; Field, 2009), if the largest VIF is greater than 10, there is cause for concern. However, the maximum VIF value in Table 5 is 1.863 and Durbin Watson value of 1.497. In addition, the tolerance is greater than 0.20 for the variables (the smallest tolerance is 0.471). Therefore, this study is not subject to high collinearity problems. Overall, there are no linearity, multicollinearity, and autocorrelation problems.

Main Findings

The table indicates R^2 of 0.555, and Adj. R^2 of 0. 509 (F=0.775, p = 0.000), which shows that a good percentage (50.9%) of the variation in ICID can be explained by variations in the whole set of independent variables.

There is a positive relationship between ICID and AUDSCORE (β=0.141) and significant at the 5% level (p= 0.037). Thus, H1 is supported, hence accepted. The results indicate that firms with independent audit committee, with financial expertise, prior experience and meeting frequently are likely to disclose more internal control information. This finding is consistent with Zhang *et al.* (2007) who provide empirical evidence that the audit committee and the external auditor play an important role in reducing internal control weaknesses.

There is a positive relationship between ICID and ACS x AUDFSZ (β=0.088) and significant at the 5% level (p= 0.060). Thus, H1 is supported, hence accepted. This result indicate that, firms with an effective audit committee and a Big Four auditor, are likely to disclose internal control information. The results also indicate complementary effect between the score of audit effectiveness and audit firm size in the disclosure of internal control information. This finding is consistent with Khlif and Samaha, (2016) who found that in Egypt the association between audit committee activity and internal control quality is more pronounced when an organisation is audited by a Big 4 audit firm.

There is a positive relationship between ICID and ACSORE x AUDFEE (β =0.056) but insignificant at the 5% level (p=0.427). Thus, H2 is not supported, hence rejected. This result indicate that, firms with an effective audit committee and disclose audit fee, are not likely to disclose internal control information.

There is a positive relationship between ICID and ACSORE x TENURE (β =0.068) and significant at the 1% level (p=0.003). Thus, H3 is supported hence accepted. This results indicate that, firms with an effective audit committee and long auditor tenure, are likely to disclose internal control information.

With regards to the control variables the findings are as follows:

There is a positive relationship between ICID and BDS (β =0.141) and significant at the 1% level (p=0.029). This result indicate that, board size influence disclosure of internal control information.

There is a positive relationship between ICID and LEV (β =0.109) but insignificant at the 1% level (p=0.152). This result indicate that, leverage does not influence disclosure of internal control information. This is consistent with Xiaowen (2013) who posits that companies with high leverage are not willing to disclose internal control information.

There is a negative relationship between ICID and PROF (β =0.137) and significant at the 1% level (p=0.054). This result indicate that, the higher a firm's profitability the lower the amount of internal control information disclosed. This finding is inconsistent with Xiaowen, (2013 p. 631), who posits that, "when a company reaches a certain level of profitability, the governance structure will be relatively complete and internal control will be correspondingly sound, so it will actively disclose internal control information".

There is a negative relationship between ICID and PNED (β =0.255) and significant at the 1% level (p=0.000). This result indicate that, firms with a higher proportion of non-executive (independent) directors are not likely to disclose internal control information.

CONCLUSION

This paper examined the linkages between audit committees' effectiveness, audit quality and internal control information disclosure. Empirical evidence on the effect of audit committee effectiveness and audit quality on internal control information disclosure is scanty. Using a 210 firm-year sample of firms listed on the Ghana Stock Exchange for the period, 2013-2017, the paper tried to fill the research gap. The dependent variable ICID has a mean of 41 per cent, the minimum is 19 per cent, the maximum being 81 per cent with a standard deviation of 21 per cent. The low level (41%) of internal control information disclosure makes it very difficult for the firms' stakeholders to determine future performance of the company. After controlling for board size, proportion of independent directors and leverage, the results from univariate and multivariate analyses indicated that effective audit committee and audit firm size play complimentary and substitution roles in ensuring internal control information disclosure. Board size and proportion of independent directors were also found to influence the disclosure of quality voluntary information.

This study makes several important contributions. The analysis fills a gap in the extant literature where very little research has examined the relationship between effective audit committee and audit quality on internal control information disclosure. The findings are consistent with agency theory, suggesting that effective audit committee and audit quality tend to support the disclosure of internal control information.

The results also have implication for managers and policy makers. With regard to managers, findings from the study emphasize audit committee that have finance and accounting expertise which meets regularly, cooperating with auditors from the Big Four auditing firms can help increase the disclosure of internal control information. With respect to policy makers, the results highlight that effective audit committee and audit quality help promote the disclosure of internal control information. Hence, they should encourage corporate boards to insist on audit committees having people with finance and accounting qualification and meeting regularly with their external auditor to ensure disclosure of voluntary information.

Despite the contributions and the implications of the findings, there are some limitations to this study. Whilst the independent and control variables included in the regression model are all validated by prior research, there may exist other factors influencing internal control information disclosure that were not addressed by this study. Further researchers may consider other corporate governance variables such as; audit committee gender, audit committee chair financial expertise and ownership concentration, etc., in order to provide an in-depth explanation to determine the relationship between audit committee effectiveness and audit quality on disclosure of internal control information.

Furthermore, the same methodology can be used by other researchers using data from other emerging markets where there is lack of evidence, to measure the effect of audit committee effectiveness and audit quality on disclosure of internal control information.

REFERENCES

Abbott, L. J., Park, Y., & Parker, S. (2000). The effects of audit committee activity and independence on corporate fraud. *Managerial Finance*, *26*(11), 55–67. doi:10.1108/03074350010766990

Abbott, L. J., Parker, S., & Peters, G. F. (2003). Audit committee characteristics and restatements: A study of the efficacy of certain Blue Ribbon Committee recommendations. *Auditing*, *23*(1), 69–87. doi:10.2308/aud.2004.23.1.69

Abbott, L. J., Parker, S., & Peters, G. F. (2004). Audit committee characteristics and restatements. *Auditing*, *23*(1), 69–87. doi:10.2308/aud.2004.23.1.69

Agyei-Mensah, B. K. (2016a). Accountability and internal control in religious organisations: A study of Methodist church Ghana, *African Journal of Accounting. Auditing and Finance*, *5*(2), 95–112.

Agyei-Mensah, B. K., (2016b). Internal control information disclosure and corporate governance: evidence from an emerging market. *Corporate Governance: The International Journal of Business in Society, 16*(1), 79-95.

Aljifri, K., & Hussainey, K. (2007). The determinants of forward-looking information in annual reports of UAE companies. *Managerial Auditing Journal*, *22*(9), 881–894. doi:10.1108/02686900710829390

Alkhatib, K. (2014). The determinants of forward-looking information disclosure. *Procedia: Social and Behavioral Sciences*, *109*, 858–864. doi:10.1016/j.sbspro.2013.12.554

Alsaeed, K. (2006). The Association Between Firm-specific Characteristics and Disclosure. *Managerial Auditing Journal*, *21*(5), 476–496. doi:10.1108/02686900610667256

Alzoubi, E. S. S., & Selamat, M. H. (2012). The effectiveness of corporate governance mechanisms on constraining earnings management: Literature review and proposed framework. *International Journal of Global Business*, *5*(1), 17–35.

Ashbaugh-Skaife, H., Collins, D., & Kinney, W. Jr. (2007). The discovery and reporting of internal control deficiencies prior to SOX-mandated audits. *Journal of Accounting and Economics, Vol.*, *44*(1-2), 166–192. doi:10.1016/j.jacceco.2006.10.001

Barako, D. G., Hancock, P., & Izan, H. Y. (2006). Factors influencing voluntary corporate disclosure by Kenyan companies. *Corporate Governance*, *14*(2), 107–125. doi:10.1111/j.1467-8683.2006.00491.x

Bedard, J. C., Chtourou, S. M., & Courteau, L. (2004). The effect of audit committee expertise, independence, and activity on aggressive earnings management. *Auditing*, *23*(2), 13–35. doi:10.2308/aud.2004.23.2.13

Bepari, M. K., & Mollik, A. T. (2015). Effect of audit quality and accounting and finance backgrounds of audit committee members on firms' compliance with IFRS for goodwill impairment testing. *Journal of Applied Accounting Research*, *16*(Issue: 2), 196–220. doi:10.1108/JAAR-05-2013-0038

Bushee, B., & Noe, C. (2003). Corporate Disclosure Practices, Institutional Investors, and Stock return Volatility. *Journal of Accounting Research*, *38*(Suppl.), 171–202. doi:10.2307/2672914

Carcello, J. V., Hollingsworth, C. W., Klein, A., & Neal, T. L. (2006). *Audit committee financial expertise, competing corporate governance mechanisms, and earnings management*. Available at: https://ssrn.com/abstract_887512

Carcello, J. V., Vanstraelen, A., & Willenborg, M. (2009). Rules rather than discretion in audit standards: Going-concern opinions in Belgium. *The Accounting Review*, *84*(5), 1395–1428. doi:10.2308/accr.2009.84.5.1395

Celik, O., & Ecer, A., & Karabacak. (2006). Disclosure of forward-looking information: Evidence from listed companies on Istanbul stock exchange. *Investment Management and Financial Innovations*, *3*(2), 197–216.

Chen, C. J. P., & Jaggi, B. (2000). Association between independent non-executive directors, family control and financial disclosures in Hong Kong. *Journal of Accounting and Public Policy*, *19*(, 4-5), 285–310. doi:10.1016/S0278-4254(00)00015-6

Coffee, J. C. (2005). A theory of corporate scandals: Why the USA and Europe differ. *Oxford Review of Economic Policy*, *21*(2), 198–211. doi:10.1093/oxrep/gri012

Cohen, J., Krishnamoorthy, G., & Wright, A. (2004). The corporate governance mosaic and financial reporting quality. *Journal of Accounting Literature*, *23*, 87–152.

Cornett, M. M., McNutt, J. J., & Tehranian, H. (2009). Corporate governance and earnings management at large US bank holding companies. *Journal of Corporate Finance*, *15*(4), 412–430. doi:10.1016/j.jcorpfin.2009.04.003

COSO. (1992). *Internal Control Integrated Framework*. Retrieved June 25 2015, from http://www.coso.org/publications/executive_summary_integrated_framework.htm

Costello, A., & Wittenberg-Moerman, R. (2011). The impact of financial reporting quality on debt contracting: Evidence from internal control weakness reports. *Journal of Accounting Research*, *49*(1), 97–136. doi:10.1111/j.1475-679X.2010.00388.x

Deumes, R. (2004). *Voluntary reporting on internal control by listed Dutch companies*. Working paper, Maastricht University, Maastricht, Faculty of economics and business administration.

Deumes, R., & Knechel, W. R. (2008). Economic incentives for voluntary reporting on internal risk management and control systems. *Auditing*, *27*(1), 35–66. doi:10.2308/aud.2008.27.1.35

Donnelly, R., & Mulcahy, M. (2008). Board structure, ownership and voluntary disclosure in Ireland. *Corporate Governance*, *16*(5), 416–429. doi:10.1111/j.1467-8683.2008.00692.x

Doyle, J., Ge, W., & McVay, S. (2007). Determinants of weaknesses in internal control over financial reporting. *Journal of Accounting and Economics*, *44*(1/2), 193–223. doi:10.1016/j.jacceco.2006.10.003

Eng, L., & Mak, Y. (2003). Corporate governance and voluntary disclosure. *Journal of Accounting and Public Policy*, *22*(4), 325–345. doi:10.1016/S0278-4254(03)00037-1

Fama, E., & Jensen, M. (1983). Separation of Ownership and Control. *The of Law and Economics*, *26*(2), 36–67.

Fan, J. P. H., & Wong, T. J. (2005). Do external auditors perform a corporate governance role in emerging markets? Evidence from East Asia. *Journal of Accounting Research*, *43*(1), 35–72. doi:10.1111/j.1475-679x.2004.00162.x

Fang, H., Sun, H., & Jin, Y. (2009). Corporate characteristics, external audit, and voluntary disclosure of internal control information: An empirical study based on annual reports of listed companies of Shanghai stock exchanges from 2003 to 2005. *Accountability in Research*, *10*(1), 44–95.

Field, A. (2009). *Discovering Statistics Using SPSS for Windows* (3rd ed.). London: Sage Publications.

Graham, J. H., Harveya, C. R., & Rajgopal, S. (2005). The economic implications of corporate financial reporting. *Journal of Accounting and Economics*, *40*(1-3), 3–73. doi:10.1016/j.jacceco.2005.01.002

Grougiou, V., Leventis, S., Dedoulis, E., & Owusu-Ansah, S. (2014). Corporate Social Responsibility and Earnings Management in U.S. Banks. *Accounting Forum*, *38*(3), 155–169. doi:10.1016/j.accfor.2014.05.003

Gul, F. A., & Leung, S. (2004). Board leadership, outside directors' expertise and voluntary corporate disclosures. *Journal of Accounting and Public Policy*, *23*(5), 351–379. doi:10.1016/j.jaccpubpol.2004.07.001

Haniffa, R. M., & Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*, *24*(5), 391–430. doi:10.1016/j.jaccpubpol.2005.06.001

Hermanson, H. M. (2000). An analysis of the demand for reporting on internal control. *Accounting Horizons*, *14*(3), 325–341. doi:10.2308/acch.2000.14.3.325

Ho, S. M. S., & Wong, K. R. (2001). A Study of the Relationship Between Corporate Governance Structures and the Extent of voluntary Disclosure. *Journal of International Accounting, Auditing & Taxation, Vol.*, *10*(2), 139–156. doi:10.1016/S1061-9518(01)00041-6

Hunziker, S. (2013). Efficiency of internal control: Evidence from Swiss non-financial companies. *The Journal of Management and Governance*, 401–433.

Johl, S. K., Johl, S. K., Subramaniam, N., & Cooper, B. (2013). Internal audit function, board quality and financial reporting quality: Evidence from Malaysia. *Managerial Auditing Journal*, *28*(9), 780–814. doi:10.1108/MAJ-06-2013-0886

Khlif, H., & Samaha, K. (2016). Audit committee activity and internal control quality in Egypt: Does external auditor's size matter? *Managerial Auditing Journal*, *31*(3), 269–289. doi:10.1108/MAJ-08-2014-1084

Knechel, W. R., Krishnan, G. V., Pevzner, M. B., Stefchik, L., & Velury, U. (2013). Audit quality: Insights from the academic literature. *Auditing*, *32*(1), 385–421. doi:10.2308/ajpt-50350

Krishnan, J. (2005). Audit Committee Financial Expertise and Internal Control: An Empirical Analysis. *The Accounting Review*, *80*(2), 649–675. doi:10.2308/accr.2005.80.2.649

Lary, A. M., & Taylor, D. W. (2012). Governance characteristics and role effectiveness of audit committees. *Managerial Auditing Journal*, *27*(4), 336–354. doi:10.1108/02686901211217969

Lim, S., Matolcsy, Z., & Chow, D. (2007). The association between board composition and different types of voluntary disclosure. *European Accounting Review*, *16*(3), 555–583. doi:10.1080/09638180701507155

Lin, J. W., Li, J. F., & Yang, J. S. (2006). The effect of audit committee performance on earning quality. *Managerial Auditing Journal*, *21*(9), 921–933. doi:10.1108/02686900610705019

Mitchell, V. Z., Singh, H., & Singh, I. (2008). Association between independent audit committee members' human-resource features and underpricing. The case of Singapore IPOs from 1997-2006. *Journal of Human Resource Costing & Accounting*, *12*(3), 179–212. doi:10.1108/14013380810919840

Norwani, N., Mohamad, Z. Z., & Chek, I. A. (2011). Corporate governance failure and its impact on financial reporting within selected companies. *International Journal of Business and Social Science, 2*, 205 – 213.

Pallant, Y. (2011). *SPSS Survival Manual: A Step by Step Guide to Data Analysis using SPSS for Windows* (3rd ed.). McGraw Hill Open University Press.

Patteli, L., & Prencipe, A. (2007). The Relationship Between Voluntary Disclosure and Independent Directors in the Presence of a Dominant Shareholder. *European Accounting Review*, *16*(1), 5–33. doi:10.1080/09638180701265820

Razman, S. R., & Iskandar, M. (2004). The effectiveness of audit committee in monitoring the quality of corporate reporting. In *Corporate Governance: An International Perspective* (pp. 154–175). Kuala Lumpur: Malaysian Institute of Corporate Governance.

Shah, A. S. Z., & Butt, S. A. (2009). The impact of corporate governance on the cost of equity: Empirical evidence from Pakistani listed companies. *The Lahore Journal of Economics*, *14*(1), 139–171. doi:10.35536/lje.2009.v14.i1.a6

Sun, F., Wei, X., & Xu, Y. (2012). Audit committee characteristics and loss reserve error. *Managerial Auditing Journal*, *27*(4), 355–377. doi:10.1108/02686901211217978

Verschoor, C. C. (2002). Reflections on the audit committee's role. *Internal Auditor*, *59*(April), 26–35.

Wahab, E. A., Mat Zain, M., & James, K. (2011). Political connections, corporate governance and audit fees in Malaysia. *Managerial Auditing Journal*, *26*(5), 393–418. doi:10.1108/02686901111129562

Wang, K., Sewon, O., & Claiborne, M. C. (2008). Determinants and consequences of voluntary disclosure in an emerging market: Evidence from China. *Journal of International Accounting, Auditing & Taxation*, *17*(1), 14–30. doi:10.1016/j.intaccaudtax.2008.01.001

Xiaowen, S. (2013). Corporate characteristics and internal control information disclosure – evidence from annual reports in 2009 of listed companies in Shenzhen stock exchange. *Physics Procedia*, *25*(1), 630–635.

Xie, B., Davidson, W. III, & DaDalt, P. (2003). Earnings management and corporate governance: The role of the board and the audit committee. *Journal of Corporate Finance*, *9*(3), 295–316. doi:10.1016/S0929-1199(02)00006-8

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. doi:10.1016/j.jaccpubpol.2007.03.001

APPENDIX

Table 5. Internal control evaluation sheet

Item	Content	Scores
Internal Environment	Corporate governance structure, human resources policies, corporate culture	Disclosing =1, Otherwise =0
Risk Evaluation	Identification of internal and external risk, risk analysis, risk responses	Disclosing =1, Otherwise =0
Control Activities	Internal control activities based on risk evaluation	Disclosing =1, Otherwise =0
Information and Communication	The establishment of information and communication system	Disclosing =1, Otherwise =0
Internal Supervision	Internal supervision from internal audit department	Disclosing =1, Otherwise =0
Internal control defects	The defects or abnormal items in internal control and the improvement methods	Disclosing =1, Otherwise =0
Internal assessment	Assessment from board of directors	Disclosing =1, Otherwise =0
External assessment	External auditor's assessment	Disclosing =1, Otherwise =0

Adapted from: Jainfei Leng and Yiran Ding (2011)