Impact of audit committee attributes on financial reporting quality and timeliness: an empirical study

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Abstract: This paper investigates impact of audit committee attributes on financial reporting quality and timeliness of listed firms in Ghana. The study uses 90 firm-year observations for the period 2013–2015 for firms listed on the Ghana Stock Exchange. A descriptive analysis was performed to provide the background statistics of the variables examined. This was followed by regression analysis, which forms the main data analysis. The descriptive statistics indicate that over the four years, the mean value of financial reporting quality is 42% and timeliness of financial reporting is 86 days. The regression analysis results indicate that: financial reporting quality has a statistically positive relationship with audit committee financial expertise and size; audit report lag has a statistically negative relationship with audit committee financial expertise and audit committee independence. This study is one of the few to measure the influence of audit committee characteristics on financial reporting quality and timeliness in Sub-Saharan Africa.

Keywords: corporate governance; audit committee; Ghana, financial reporting quality; timeliness of reporting.

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1 Introduction

This study examines whether audit committee compositional features are associated with financial reporting timeliness (i.e., audit report lag) by firms listed on the Ghana Stock Exchange (GSE). In the wake of recent corporate failures, the necessity of establishing audit committees to enhance financial reporting timeliness has been emphasised. Sultana et al. (2015) and Bedard and Gendron (2010) highlighted the need to study the linkage between audit committee effectiveness and financial reporting timeliness. As such, research examining the influence of audit committee characteristics on financial reporting

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timeliness certainly requires in-depth investigation and provides the motivation for this study.

One important qualitative characteristic in the conceptual framework for financial reporting (IASB, 2010) is relevance. To be relevant, accounting information must have the characteristics of timeliness. Timeliness means having information available to decision makers, before it loses its capacity to influence decisions. Timeliness alone, cannot make information relevant, but lack of timeliness, can rob information of relevance it might otherwise have had.

The accounting regulators, professional agencies and users of accounting information all established that timeliness of company annual reports is a significant characteristic of financial accounting information (Al-Ajmi, 2008). Although regulators like Securities and Exchange Commission (SEC) and Stock exchanges requirements exert significant influence over financial reporting timeliness, there remains considerable discretion over when firms release their financial statements. Thus not all firms are able to meet these requirements by publishing their financial statements on time. Ghana securities laws and regulations require publicly listed companies to submit to the Registrar financial results within 42 days after year-end.

According to Agyeman et al. (2013), although Ghana has sufficient laws and regulations with respect to corporate governance, the major challenge is the absence of active devices for their effective enforcement, thus leaving Ghana deficient in corporate governance practices. This paper examines the extent to which listed firms are complying with the regulations. The paper also examines the extent to which financial reporting lag in Ghana is influenced by audit committee attributes. The findings will therefore help regulators to know the factors that contribute to financial reporting lag before effective measures can be implemented to overcome the problems of financial reporting timeliness.

Delayed disclosure of an auditor's opinion on the true and fair view of financial information prepared by the management exacerbates the information asymmetry and increases the uncertainty in investment decisions (Mohamad-Nor et al., 2010).

Timely reporting will enhance decision making and reduce information asymmetry in the capital market (Owusu-Ansah and Leventis, 2006). The issue of timely reporting also affects regulators and policy makers since they need to play a role in ensuring the shorter gap of financial report delay. Hence, exploring the determinants of timely reporting would enhance the regulators of emerging capital market in formulating new policies to improve the allocation efficiency of their markets. Previous research shows that audit committee characteristics affect the quality and timeliness of financial reports. Dechow and Skinner (2000) argue that a board sub-committee and financial expertise of its members affect the way managers manipulate earnings to achieve corporate or personal benefits. Sharinah et al. (2014) found that audit committee independence and audit committee meetings are significantly associated with financial reporting timeliness in Malaysia. Sharma et al. (2009) also suggest that the audit committee may influence audit timeliness, though they did not test the predicted association. Afify (2009) documents that the voluntary establishment of an audit committee reduces audit lag in Egypt. A comprehensive review of the literature on audit committee and financial reporting by Bedard and Gendron (2010) indicates that the association between audit committee and timeliness of financial reporting is inconclusive.

Given the importance of financial reporting timeliness to investors, identifying the determinants of financial reporting delay has become a significant move to improve the financial reporting quality and also continue to motivate researchers to examine the factors that may influence the timeliness of financial reporting. There is a remarkable gap in prior literature addressing the hitherto unexplored question of whether audit committee's different attributes affect the level of financial reporting quality and timeliness, particularly in emerging and transition markets. Indeed, the present study aims to delineate the role of an audit committee as an important component of a given firm's overall corporate governance structure, particularly with respect to audit quality and oversight of financial reporting, in promoting the financial reporting quality and timeliness of reporting. Little research has been conducted in the African context and this study is conducted to fill the gap.

This study is important both from the perspectives of academic research and business practice. This area has been under-researched by the academic community and much of the research that has been done on the timeliness of financial reporting has used Zimbabwe as a case study. Not much has been done to examine the case of listed firms on the GSE.

From the perspective of business practitioners, they need to establish benchmarks in order to determine how they are doing compared to other companies in their own country as well as internationally. Companies in Ghana can re-look into how to further improve audit committee composition in order to enhance the timeliness of financial reporting. With regard to managers in Ghana, findings from the study emphasise that audit committee financial accounting expertise improves the external auditors' reliance on internal audit work and this can improve financial reporting timeliness. There is therefore, the need to include more people with accounting knowledge on the audit committees.

Regulators also need to know the factors that contribute to audit delay before effective measures can be implemented to overcome the problems of financial reporting timeliness.

The remainder of this paper is organised as follows. Next section describes literature review and hypotheses development. Third section explains research methodology while results and discussion are presented in the fourth section. Final section summarises conclusion of this study.

2 Theoretical background, literature review and hypotheses development

2.1 Theoretical background

2.1.1 Agency theory

The principal agent relationship has brought some problems which include: agency cost and information asymmetry. Agency theory assumes that the interest of the principal and agent varies and that the principal can control or reduce this by giving incentives to the agent and incurring expenses from activities designed to monitor and limit the self-interest activities of the agent (Jensen and Meckling, 1976; Hill and Jones, 1992).

Jensen and Meckling (1976) argued that the separation of ownership and control creates the agency problem, where management, as rational human beings, tends to set their personal interest ahead that of shareholders. This agency problem leads to information asymmetry due to the information superiority that management enjoys as insiders. Myers and Majluf (1984) argued that information asymmetry gives rise to adverse selection problem which leads to under-valuing of the firm's equity in the marketplace and thus causing loss of wealth to the shareholders. Therefore in order to reduce information asymmetry, there is the need for governance mechanisms such as board sub-committees composed of directors with the appropriate attributes such as independence, expertise and experience to prevent or reduce the selfish interest of the agent (Wiseman et al., 2012).

Agency theory suggests that a greater proportion of outside directors could monitor any self-interest by managers and so minimise agency costs. According to Kelton and Yang (2008), a high percentage of independent directors on board could intensify the monitoring of managerial opportunism. In so doing they succeed in reducing management's chance of withholding information (in a timely manner). Consequently, a board dominated by independent non-executive directors who are free from management interests tend to enhance firm's compliance with disclosure requirements, which may lead to timely financial reporting. Al-Ajmi (2008) and Shukeri and Islam (2012) support agency theory by providing evidence that corporate governance mechanisms contribute towards ensuring the timeliness of financial reporting.

2.1.2 Audit committee

An Audit committee is defined as a committee appointed by a company as a liaison between the board of directors and the external auditors, this committee normally has a majority of non-executive directors and is expected to view the company's affairs in a detached and dispassionate manner (Habbash, 2010). Audit committees were relatively rare until the 1970s, when large corporations increased their voluntary formation (Appah and Appiah, 2011). The audit committee serves as a major communication intermediary between major parties in the financial reporting process (e.g., board of directors, corporate management, internal auditors and external auditors) by providing a key monitoring oversight function (e.g., via reviews to nominate auditors, scope of external and internal audit work, implementation of internal controls). It meets with the Company's external auditors to discuss accounting, auditing, internal control and financial reporting matters. The external and internal auditors have unrestricted access to the finance and audit committee.

Also, the audit committee is charged with protecting investor interests by ensuring the high quality of financial information disclosed; monitoring accounting policy choices; hiring, performance managing, if appropriate, and maintaining the independence of the external auditor; compliance with regulatory requirements; monitoring and oversight of the internal audit function; and evaluation of risk management practices (Goodwin, 2003).

Audit committee (AC) is expected to play vital role in the areas of financial reporting (including controls) auditing and corporate governance (e.g., facilitate communication between the board and the external auditors). DeZoort (1998) found that the most important duty for the AC is to evaluate controls. Other important functions are to review financial statements, effectiveness of internal and external audits, management letter of the external auditor, and to evaluate auditor's independence. With these important responsibilities on the shoulders of the audit committee it becomes relevant to research into how audit committees of listed firms in Ghana are performing their roles.

2.1.3 Financial reporting quality

There is no universally approved single measure of financial reporting quality (Dechow et al., 2011). Financial reporting quality does not only means earnings or stock price changes, but is a multi-dimensional term that requires comprehensive measure (IASB, 2010). Beest et al. (2009) provides a non-exhaustive classification of methods widely used in prior studies to assess financial reporting quality, i.e., accrual models, value relevance models, and methods that operationalise the qualitative characteristics. Beest et al. (2009) measured the quality of financial reporting in terms of qualitative characteristics. They developed a quality assessment tool using a 21-item index comprising both fundamental (relevance and faithful representation) and enhancing qualitative characteristics (understandability and comparability). Biddle et al. (2009) and Nasser and Nuseibeh (2003) and define financial reporting quality as the precision with which financial reporting conveys information about the firm's operations or compliance of accounting standards of a particular country, or the extent to which the published financial statements and related disclosures capture the essence of the operations and financial position of the reporting entity. The International Accounting Standards Board (IASB, 2010) *Framework for the Preparation and Presentation of Financial Statements* states that there are some qualitative characteristics that make the information provided in financial statements useful to users. These qualitative characteristics are relevance, faithful representation, comparability and understandability. According to the IASB (2010), relevance and faithful representation are the fundamental qualities, whilst comparability and understandability are enhancing qualities.

Understandability is the quality of information that enables users to perceive its significance. The benefits of information may be increased by making it more understandable and hence useful to a wider circle of users. Presenting information, which can be understood only by sophisticated users and not by others creates a bias, which is inconsistent with the standard of adequate disclosure. Presentation of Information should not only facilitate understanding, but also avoid wrong interpretation of financial statements. Preparers of financial statements compute accounting ratios to enable users understand the reports.

Another enhancing quality of accounting information is that of comparability. Users must be able to compare the financial statements of an enterprise over time to identify trends in its financial position and performance. Users must also be able to compare the financial statements of different enterprises to evaluate their relative financial position, performance and financial adaptability. Consistency is therefore required (IASB, 2010). This study defines the quality of financial reporting in terms of the qualitative characteristics. The measurement of financial reporting quality in terms of qualitative characteristics is important because the qualitative characteristics are those attributes that make the information in the financial statements useful to users (IASB, 2010).

2.1.4 Timeliness of financial reports

Most countries have regulatory authorities who have set limitations to the maximum time for publishing financial reports. In spite of these limitations to the timing, not every company complies with the disclosure regulations. For instance in the study of Alford et al. (1994), 20% of US companies filed their 10-K after the due date. However, almost all regions in the world impose some sort of liability, civil or criminal, on the companies which are violating the rules concerning the timing of financial reports or which give misleading or false information to the markets (Mahajan and Chander, 2008).

The timeliness of audited company annual reports is regarded as a significant factor influencing the usefulness of information available to external users for the decision-making process (Al-Ajmi, 2008; Al-Ghanem and Hegazy, 2011).

The importance of the research on reporting lag is also mentioned by Givoly and Palmon (1982) who said that while numerous studies had their focus on the usefulness of annual reports and some have examined the added benefits of the more frequent quarterly reports, lesser research is done on reporting lag. However, the delay in the release of financial statements is likely to increase the level of uncertainty associated with the decision making by stakeholders, which in turn could lead to non-optimal or delayed decisions.

There is no universally approved single measure of financial reporting lag. There are two important forms of timeliness according to Feltham (1968) namely: 'reporting delay' and 'reporting interval'. Reporting delay can also be described as reporting lag. Reporting interval can be seen as how frequent a company reports their information, the more frequent the better the timeliness because information is spread on more occasions (Fu et al., 2012).

Al-Ajmi (2008) examined the corporate reports timeliness for the three lags periods; audit lag period, interim period and the total of audit lag. Companies often take a considerable length of time to release their financial statements as these financial statements are required to be audited by external auditors. The auditing literature suggests that the length of time taken by the auditor to complete the audit is often determined by the extent and amount of audit work to be performed. Audit lag period is measured based on the period between the auditors' signature date and the publication date. The result shows, company's size, profitability, industry and leverage significantly affect audit lag period which are consistent with findings from Ismail and Chandler (2004), Afify (2009) and Lee et al. (2008). Afify (2009) examines the impact of corporate governance characteristics on audit report lag, and finds corporate governance characteristics (board independence, duality of CEO and existence of audit committee) as significantly related to audit report lag.

Generally, researchers distinguish between two types of financial reporting lag: audit report lag; and management report lag. Audit report lag is the period from a firm's year-end and the audit report date (Lai and Cheuk, 2005; Leventis et al., 2005); while management report lag is a period between the end of the fiscal year of firms and the publication of the audited financial reports (Zaitul, 2010). In addition, Lee et al. (2008) talked about total report lag. They state that the total reporting lag can be separated further into the audit reporting lag and the discretionary reporting lag. The previous means the days between the fiscal year end and the date of audit signing and the latter the number of days between the date of audit signing and the date of official earnings announcement. After the signing of the audit report the audited financial statements can be released. Audit report lag jeopardises the quality of financial information by not providing timely information to key stakeholders. In principle, it is argued that there is an inverse relationship between information value and the time taken to prepare financial statements, specifically the longer the time taken by the auditor to complete the audit, as reflected in the audit report lag, the stronger the signal to the market as there may be negative issues arising from the audit.

According to Owusu-Ansah (2000), literature on the timeliness of corporate annual financial reporting is of two main types. The first type is concerned with the impact of timely reporting on variability of stock returns. The second type is mainly concerned with the pattern, reporting lag, and the factors influencing timely reporting behaviour. An important definition of timeliness in previous research is that of asymmetric timeliness. Asymmetric timeliness arises when, for example, good or bad news is reported more or less rapidly. This good/bad news example is a factor of influence on reporting lag that is mentioned in almost all previous researches about reporting lag, e.g., Chambers and Penman (1984) and Ismail and Chandler (2003).

Financial reporting lag in this study refers to audit report lag, i.e., the length of time between the fiscal year-end of a company and the date of the auditor's report. This definition is adopted as it is very difficult to find the date of publication of the audited financial reports by companies in Ghana. Taking into consideration the importance of timeliness of financial reporting it is therefore, relevant to research into the role of the audit committee in enhancing the timeliness of financial reporting in Ghana.

2.1.5 Hypotheses development

2.1.5.1 Audit committee financial expertise

Prior research finds that the type of financial expertise may differentially affect financial reporting quality (e.g., Badolato et al., 2013; Dhaliwal et al., 2010).

According to Dhaliwal et al. (2010), the most effective audit committees are achieved when companies present a combination of both accounting and financially literate/trained independent directors. More specifically, they determined a director as a 'financial expert' on an audit committee if they are an independent director, they have training in both accounting and finance, they have been an executive director in the accounting and finance department of other entities and they have been a member of the audit committee of other entities. The presence of financial and accounting experts on the audit committees could enhance the board's monitoring role (Carcello et al., 2006) to recognise accounting and risk problems. These directors, among all board or audit committee members, have the best ability to distinguish among accounting policies (as conservative or aggressive), and they have incentives, more than other directors, to promote conservatism (Krishnan and Visvanathan, 2008). Firms with more competent audit committees whose members include a financial expert are less likely to have internal control deficiencies (Zhang et al., 2007), financial reporting problems (McMullen and Raghunandan, 1996), or restatements (Cohen et al., 2013). Agency theory advocates, according to Sultana et al. (2015), argue that the presence of members with financial expertise enhances the audit committee's ability to ensure the external auditor's work is competently undertaken and comprehend audit judgements. Using post-SOX data, Dhaliwal et al. (2010) find that financial reporting quality is positively related to accounting expertise on the audit committee. Xie et al. (2003), Abbott et al. (2004) and Bedard et al. (2004) also report that audit committee financial expertise reduces financial restatements or constrains the propensity of managers to engage in creative accounting. From the literature reviewed the following hypotheses will be tested:

H1a There is a significant and positive relationship between audit committee financial expertise and financial reporting quality

H1b There is a significant and negative relationship between audit committee financial expertise and audit report lag.

2.1.5.2 Audit committee gender

Women represent the diversity of the audit committee and it is calculated as the percentage of female directors on the audit committee. Agency theorists suggest the audit committee's effectiveness is dependent upon group cohesion. Prior gender diversity research suggests females are more financially conservative, ethically bound and risk-averse than males (Levin et al., 1993; Powell and Anisc, 1997). Such attitudinal differences towards key business concepts (e.g., risk, finances) can significantly impact on financial reporting quality and timeliness. Further, gender differences may fragment small group dynamics leading to the formation of majority and minority sub-groups. Thus, from an agency perspective, gender differences may reduce the audit committee's effectiveness. From the literature reviewed the following hypotheses will be tested.

H2a There is a significant and positive relationship between audit committee size and financial reporting quality.

H2b There is a significant and negative relationship between audit committee size and audit report lag.

2.1.5.3 Audit committee prior experience

The agency theory suggests that increased board monitoring through audit committees can mitigate agency costs (Chung et al., 2005). While organisational theory suggests that experienced outside directors are valuable for the firms. It can be predicted that audit committees with a higher proportion of expert members are expected to be more effective in monitoring the board and enhancing higher level of reporting quality and timeliness. Furthermore, prior audit committee experience will provide the audit committee with greater knowledge and assurance in negotiations with the external auditor, and in mediating corporate management/external auditor disagreements, thereby reducing overall audit report lag and enhancing financial reporting quality (Bedard and Biggs, 1991; DeZoort and Salterio, 2001; DeZoort et al., 2003). From the literature reviewed the following hypotheses will be tested:

H3a There is a significant and positive relationship between audit committee prior experience and financial reporting quality.

H3b There is a significant and negative relationship between audit committee prior experience and audit report lag.

2.1.5.4 Audit committee size

The number of audit committee members is used as an indication of resources available to this committee. Abbott et al. (2004) examine 41 firms that issued fraudulent reports and 88 firms which restated annual results in the period 1991–1999. They find that audit committee size had no significant impact on financial reporting quality. Nelson and Jamil (2011) found a positive relationship between audit committee size and financial reporting quality. Xie et al. (2003) and Shah et al. (2009) also found a positive relationship between audit committee size and earnings management. Nelson and Shukeri (2011) on the other found that audit size is negatively associated with audit report timeliness. Mohamad-Nor et al. (2010) document that potential problems in the financial reporting process are more likely to be uncovered and resolved with a larger audit committee. Given that the influence of audit committee size on audit report lag is mixed in terms of directionality, the following hypotheses are proposed:

H4a There is a significant and positive relationship between audit committee size and financial reporting quality.

H4b There is a significant and negative relationship between audit committee size and audit report lag.

2.1.5.5 Independent audit committee chair

The independence of committee and committee chair improves the powers of the committee, reduces agency problem and chances for expropriation by insiders (Yeh et al., 2011). The presence of AC chaired by independent director is positively associated with quality financial reporting and lower incidence of fraudulent financial reporting (Akhigbe and Martin, 2006). From the literature the following hypotheses will be tested:

H5a There is a significant and positive relationship between audit committee independence and financial reporting quality.

H5b There is a significant and negative relationship between audit committee independence and audit report lag.

2.1.5.6 Audit committee meeting

The establishment of an audit committee is meant to ensure continuous communication between external auditors, internal auditors and the board, where the committee meets regularly with the auditors to review the financial statements and audit processes as well as the internal accounting systems and controls (Habbash, 2010). Boards that meet frequently are more likely to perform their duties diligently and effectively. Based on previous studies, the present paper assumes that an active audit committee could provide more accurate and better supervision for internal and external audit function as well as the firm’s performance. Indeed, it is hypothesised that the greater the number of audit committee meetings held during the fiscal year, the more opportunity for dealing with firm’s potential problems (Abbott et al., 2000; Li et al., 2012). Xie et al. (2003) on the other hand found that financial reporting quality was significantly negatively related to the number of board meetings argued that board that meets rarely may only have time for signing of management plans and listening to presentations; hence, they may not have time to focus on issues such as earnings management or financial statement fraud. From the literature the following hypotheses will be tested.

H6a There is a significant and positive relationship between audit committee meeting and financial reporting quality.

H6b There is a significant and negative relationship between audit committee meeting and audit report lag.

3 Methodology

3.1 Sample

The population of the study includes all the 35 firms listed on the GSE at the end of 2015.

However, the sample of the study includes the firms that meet the following criteria:

- the firms should have been listed on the GSE for, at least, five years prior to the study
- firms with unavailable data were excluded.

Applying these criteria resulted in a sample of 30 firms.

The data used in the empirical analysis were derived from the financial statements of the 30 listed firms on the GSE during a three-year period, 2013–2015. Three years were selected, because firm's disclosures tend to persist across years (Bushee et al., 2003; Skinner, 1994; Graham et al., 2005). In all, 90 firm-years reports for the period 2013–2015 were used. The annual reports were downloaded from the firms' website.

3.2 Variables

3.2.1 Dependent variables

There are two dependent variables in this study; financial reporting quality (FRQ) and timeliness of financial reporting (ARL). Several dimensions of financial reporting quality that have been used by researchers are; Accrual-Based Models, Accounting Conservatism, IASB's qualitative characteristics and Earnings Management (abnormal accrual). This study defines financial reporting quality using the IASB's qualitative characteristics of relevance, faithful representation, understandability and comparability. Twenty key criteria, first used by Beest et al. (2009) (see Appendix), based on IASB authoritative pronouncements are used to construct the financial reporting quality index. A company was initially awarded a score of 1 if an item met the characteristic and 0 if an item did not meet the characteristic. The total number of items disclosed by a company was then divided by the expected total number of disclosure score of (20) and the result was used as the financial reporting quality index (FRQI).

This can mathematically be stated as follows:

$$\text{FRQI} = \frac{\text{Actual disclosure}}{\text{Total possible disclosure (20)}}$$

$$= \frac{\sum_1^m d_i}{\sum_1^n d_i}$$

where

FRQI financial reporting quality index

d_i 1 if the item d_i is disclosed (0 if not disclosed)

m number of items disclosed

n maximum number of disclosure items possible.

The second dependent variable for the study is timeliness of financial reporting. Timeliness of financial reporting was measured by computing the number of days that elapse between the company's year-end and the date of the auditor's report, i.e. audit report lag (ARL).This methodology was used in studies by Leventis et al. (2005) and McGee (2007). It was thought that using the same methodology in the present study would make it easier to compare results with those prior studies. Also as the measurement techniques are adopted from previous studies, it is believed that there are no problems with the validity and reliability of the adopted measurement techniques.

3.2.2 Independent variables

Following prior work (DeZoort et al., 2002; Sultana et al. 2015), this study uses six audit committee variables best proxying audit committee effectiveness for analysis. These are; audit committee financial expertise, audit committee gender, audit committee prior experience, audit committee size, independent audit committee, and audit committee meeting. Finally, the empirical model of the study also includes three control variables related to firm-specific characteristics (i.e., block ownership concentration, institutional ownership, and firm size).

The symbols and measurements of the independent variables are shown in Table 1.

Table 1 Independent variables symbols and measurements

Variable	*Symbol*	*Measurement*
Audit committee financial expertise	ACFE	Takes the value 1 if the company has one or more financial expert/s on the audit committee and 0 if otherwise.
Audit committee gender	ACGD	Takes the value of one if at least one director of the audit committee is female; and zero if otherwise.
Audit committee prior experience	ACPE	Takes the value of one if at least one director of the audit committee has prior audit committee experience; and zero otherwise
Audit committee size	ACSZ	The number of members of the audit committee
Independent audit committee	ACIND	takes the value of one if the majority of the audit committee are independent directors; and zero otherwise
Audit committee meeting	ACMT	The number of audit committee meetings held during the fiscal year.
Block ownership concentration	BOC	Total shareholding of top 20 shareholders divided by the total number of shares outstanding
Institutional ownership	INSTO	Percentage of institutional ownership
Firm size	FMS	The firm's total assets

Source: Adapted from Bealsley and Salterio (2001), Carcello et al. (2006) and Sultana et al. (2015)

4 Empirical results and discussion

4.1 Descriptive statistics

Table 2 presents descriptive statistics for the variables used in the model. The FRQ has a mean of 0.42, maximum of 0.55 and minimum of 0.30 with a standard deviation of 0.05. Thus the quality of financial reports published by listed firms in Ghana is very low. The implication is that the quality of financial reports of listed firms in Ghana is not fully complying with the IASB's qualitative characteristics in the conceptual framework for financial reporting.

Table 2 Descriptive statistics

	Minimum	*Maximum*	*Mean*	*Std. deviation*
FRQ	0.30	0.55	0.42	0.05
ARL	49	173	85.69	20.28
ACFE	0.0	1.0	0.88	0.33
ACSZ	3.0	6.0	4.00	0.91
ACGD	0.0	1.0	0.87	0.34
ACPE	0.0	1.0	0.78	0.42
ACMT	2.0	4.0	3.36	0.69
ACIND	0.0	1.0	0.92	0.27
INSTO	10	96.55	75.51	21.38
BOC	55	97	84	11.02
FMS	74,449	9,381,800	1,355,846	2,029,227

The mean value of timeliness of financial reporting (ARL) is 86 days (std. dev. 20 days), minimum is 49 days and maximum is 173 days. Ghana securities laws and regulations require publicly listed companies to submit to the Registrar financial results within 42 days after year-end. The findings show that none of the listed firms is able to comply with the requirement. So far no company has been sanctioned for non-compliance. This confirms the finding of Agyeman et al. (2013) who posit that Ghana has sufficient laws and regulations with respect to corporate governance, but the major challenge is the absence of active devices for their effective enforcement.

4.2 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 (Table 3) shows that ACPE has a significant relationship with ACSZ at 5% level (p = 0.023). ACIND also has a significant relationship with ACFE at 1% level (p = 0.010). These results indicate the need to pay attention to possible multicollinearity problem in the regression analysis.

Table 3 Spearman’s rho correlation analysis

Variables		*FRQ*	*ARL*	*ACFE*	*ACSZ*	*ACGD*	*ACPE*	*ACMT*	*ACIND*	*INSTO*	*BOC*	*FMS*
FRQ	Correlation coefficient	1.000										
	Sig. (2-tailed)											
ARL	Correlation coefficient	.150	1.000									
	Sig. (2-tailed)	.158										
ACFE	Correlation coefficient	.013	–.075	1.000								
	Sig. (2-tailed)	.903	.485									
ACSZ	Correlation coefficient	.079	–.086	.092	1.000							
	Sig. (2-tailed)	.457	.419	.387								
ACGD	Correlation coefficient	–.066	–.016	.053	–.055	1.000						
	Sig. (2-tailed)	.536	.878	.618	.606							
ACPE	Correlation coefficient	.065	–.029	.045	.240*	–.131	1.000					
	Sig. (2-tailed)	.540	.784	.671	.023	.218						
ACMT	Correlation coefficient	–.027	.013	–.077	–.022	–.107	–.095	1.000				
	Sig. (2-tailed)	.797	.902	.471	.838	.317	.375					
ACIND	Correlation coefficient	–.087	.117	.272**	–.035	.008	–.155	–.109	1.000			
	Sig. (2-tailed)	.413	.273	.010	.741	.939	.144	.307				
INSTO	Correlation coefficient	–.203	–.145	.057	–.081	.023	.074	–.040	.117	1.000		
	Sig. (2-tailed)	.055	.173	.595	.450	.832	.488	.712	.270			
BOC	Correlation coefficient	–.101	–.055	–.033	–.108	.144	–.068	–.039	.036	.781**	1.000	
	Sig. (2-tailed)	.343	.609	.755	.311	.177	.524	.714	.736	.000		
FMS	Correlation coefficient	–.058	–.096	.064	.065	–.115	.109	–.128	–.028	.065	.074	1.000
	Sig. (2-tailed)	.590	.370	.549	.542	.280	.308	.228	.794	.540	.490	

Notes: **Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (2-tailed).

4.3 Multicollinearity and autocorrelation tests (assessment of the validity of the FRQ model)

A regression analysis (Table 4) was performed on the dependent and independent variables to check on the existence of the multicollinearity and serial or autocorrelation problems. The tolerance and Variable Inflation Factor (VIF) tests revealed no harmful correlation. According to Pallant (2013) and Field (2009), if the largest VIF is greater than 10, there is cause for concern. However, the maximum VIF value in Table 5 is 1.269 and Durbin Watson value of 1.860. In addition, the tolerance is greater than 0.20 for the variables (the smallest tolerance is 0.788). Therefore, this study is not subject to high collinearity problems. Overall, there are no linearity, multicollinearity, and autocorrelation problems. Thus the models developed in the study are statistically significant for explaining financial reporting quality.

Table 4 Multiple regression results for FRQ and independent variables

Variables	*β*	*P*	*Tolerance*	*VIF*
Constant		.000		
ACFE	**.031**	**.008**	.900	1.111
ACSZ	**.005**	**.010**	.913	1.095
ACGD	–.067	.450	.977	1.024
ACPE	.070	.385	.927	1.079
ACMT	**–.138**	**.021**	.989	1.011
ACIND	–.064	.806	.857	1.167
BOC	–0.055	.643	.788	1.269
FMS	–0.017	.868	.995	1.005
INSTO	0.229	.030	1.000	0.995

95% conf. interval; F = 0.517; R^2 = 0.36; Adj. R^2 = 0.34; Durbin-Watson = 1.860

4.4 Regression results for financial reporting quality model

The results of the regression analysis for the financial reporting model are reported in Table 4. With regards to the direction of relationship between the dependent variable (FRQ) and the independent and control variables, the results show a positive relationship between ACFE and FRQ *(β* = .031) and statistically significant at 0.05 level (p = .008). Thus H1a is supported hence accepted. The results show that the presence of a member with knowledge in finance/accounting would enhance the quality of the financial report. This finding is consistent with Lin et al. (2014), Chan et al. (2008) and Cohen et al. (2008).

There is a positive relationship between ACSZ and FRQ (*β* = .005) and statistically significant at 0.01 level (p = .010). Thus H4a is supported hence accepted. This finding is consistent with Nelson and Jamil (2011) who found that audit committee size is positively related to financial reporting quality. This is consistent with the findings of Xie et al. (2003) and Shah et al. (2009) who also found a positive relationship between audit committee size and earnings management. The study contradicts the findings of Nelson and Jamil (2012), Chtourou et al. (2001), Klein (2002) and Meca and Ballesta (2009).

There is a negative relationship between ACMT and FRQ ($\beta = -.138$) and statistically significant at .010 level (p = .021). Thus H6b is supported hence accepted. This implies that frequency of meeting increases the level of earning manipulation which in turn decreases the quality of financial reporting. The finding is consistent with (Abbott et al., 2000; Li et al., 2012). Xie et al. (2003) who found that financial reporting quality was significantly negatively related to the number of board meetings.

The results do not provide any support for Hypotheses H2a, H3a and H5a, hence rejected.

With regards to the control variables the results show that there is a positive relationship between INSTO and FRQ (β = .229) and statistically significant at the .01 level (p = .030). This finding is consistent with Yasser et al. (2016) who found that a higher percentage of institutional and public ownership is positively associated with the financial reporting quality in the advanced economies such as Australia and Singapore.

4.5 Multicollinearity and autocorrelation tests (assessment of the validity of the ARL model)

A regression analysis (Table 5) was performed on the dependent and independent variables to check on the existence of the multicollinearity and serial or autocorrelation problems.

Table 5 Multiple regression results for ARL and independent variables

Variables	*Beta*	*Sig*	*Tolerance*	*VIF*
(Constant)		.000		
ACFE	–.128	.017	.899	1.112
ACSZ	–.129	.639	.927	1.079
ACGD	.032	.925	.927	1.078
ACPE	.042	.954	.900	1.112
ACMT	.063	.548	.958	1.044
ACIND	–.179	.013	.828	1.207
INSTO	–.075	.558	.725	1.379
BOC	–.071	.580	.720	1.388
FMS	.026	.814	.973	1.028
95% conf. interval; F = 0.629; R^2 = 0.66; Adj. R^2 = 0.39; Durbin-Watson = 1.783				

The tolerance and variable inflation factor (VIF) tests revealed no harmful correlation. According to Pallant (2013) and Field (2009), if the largest VIF is greater than 10, there is cause for concern. However, the maximum VIF value in Table 5 is 1.388 and Durbin-Watson value of 1.783. In addition, the tolerance is greater than 0.20 for the variables (the smallest tolerance is 0.720). Therefore, this study is not subject to high collinearity problems. Overall, there are no linearity, multicollinearity, and autocorrelation problems. Thus the model developed in the study is statistically significant for explaining audit reporting lag.

4.6 Regression results for audit reporting lag model

The results of regression analysis for the financial reporting model are reported in Table 5. With regards to the direction of relationship between the dependent variable (ARL) and the independent and control variables:

The results show a negative relationship between ACFE and ARL (β = –.128) and statistically significant at 0.1 level (p = .017). Thus H1b is supported hence accepted. The implication is that the presence of members with financial expertise will help reduce auditing reporting lag. This finding supports agency theory advocates who argue that the presence of members with financial expertise enhances the audit committee's ability to ensure the external auditor's work is competently undertaken and comprehend audit judgements (Sultana et al., 2015) The result is also consistent with that of Zhang et al. (2007) and Cohen et al. (2008).

There is a positive relationship between ACGD and ARL (β = .032) but statistically insignificant at .001, .005, and .10 levels (p = .925). Thus H2b is not supported hence rejected. The finding is inconsistent with Levin et al. (1993) and Powell and Anisc (1997), who argued that females on the audit committee have attitudinal differences towards key business concepts (e.g., risk, finances) hence can significantly impact on financial reporting quality and timeliness.

There is a positive relationship between ACPE and ARL (β = .042) but statistically insignificant at .001, .005 and .10 levels (p = .954). Thus H3b is not supported hence rejected. This finding is inconsistent with Sultana et al. (2015) who found a positive relationship between ACPE and ARL.

There is a negative relationship between ACSZ and ARL (β = –.129) but statistically insignificant at .001, .005 and .10 levels (p = .639). Thus H4b is not supported hence rejected. This is inconsistent with Nelson and Shukeri (2011) found that audit size is statistically negatively associated with audit report timeliness.

There is a negative relationship between ACIND and ARL (β = –.179) and statistically significant at 0.1 level (p = .013). Thus H5b is supported hence accepted. The results imply that audit committee comprising a majority of independent directors are more likely to improve the timeliness of financial reporting in their organisations. This will also in the long-run help improve the reporting quality. The finding also support agency theory advocates, such as Abbott et al. (2000) who claim that an independent audit committee is less likely to be compromised in undertaking the sub-committee's roles and responsibilities.

There is a positive relationship between ACMT and ARL (β = .063) but statistically insignificant at .001, .005 and .10 levels (p = .639). Thus H6b is not supported hence rejected.

5 Conclusions

This study examines whether audit committee compositional features are associated with financial reporting quality and timeliness (i.e., audit report lag) by firms listed on the GSE. In the wake of recent corporate failures, the necessity of establishing audit committees to enhance financial reporting quality and timeliness has been emphasised. Preventing fraudulent financial reporting, reducing audit report lag and restoring confidence in financial statements are some important functions of the audit committee. Relying on agency theory, this paper tried to test how audit committees of firms listed on the GSE are performing these important roles. The analyses focused on six audit committee characteristics: financial expertise, size, gender, prior audit committee experience, independence and meetings.

Based on analysis using 90 firm-year observations of data obtained from GSE listed firms from 2013 to 2015, this study came out with the following findings; The FRQ has a mean of 0.42, maximum of 0.55 and minimum of 0.30 with a standard deviation of 0.05.Thus the quality of financial reports published by listed firms in Ghana is very low. The implication is that the quality of financial reports of listed firms in Ghana is not fully complying with the IASB's qualitative characteristics in the conceptual framework for financial reporting. The study found evidence of significant positive relationship between audit committee member's financial expertise, audit committee size, institutional ownership and FRQ. The study also found a significant negative relationship between audit committee meeting and FRQ.

With regards to the audit reporting lag, the study found that the mean value of timeliness of financial reporting (ARL) is 86 days (std. dev. 20 days), minimum is 49 days and maximum is 173 days. Ghana securities laws and regulations require publicly listed companies to submit to the Registrar financial results within 42 days after year-end. The findings show that none of the listed firms is able to comply with the requirement. The study found evidence of a significant negative relationship between audit committee financial expertise and audit committee independence and audit report lag. Overall, the results are consistent with agency theory.

This study has practical implications for regulators listed firms, and investors. This study may serve as an input for policymakers and regulators in formulating policies and strategies concerning the quality and timeliness of financial reports. Companies that are not timely in their financial reporting practices may find it more difficult to attract capital. Their corporate governance practices may also be seen as less than ideal, which hurts a company's reputation within the financial community. Thus, listed firms that are slow in reporting their financial results may suffer negative consequences in terms of reputation and ability to raise capital. The stock exchange and the SEC should impose sanctions on companies who do not meet the reporting requirements. Concerning managers in Ghana, findings from the study emphasise that audit committee financial accounting expertise improves the external auditors' reliance on internal audit work and this can improve financial reporting timeliness. There is, therefore, the need to include more people with accounting knowledge in the audit committees. Companies should also engage qualified accountants as internal auditors as that will positively impact on the work of the external auditors.

There is also the need for all listed firms to increase the number of members with financial expertise as such members play significant roles in checkmating the financial report prepared by managers and reducing the likelihood of earnings management and also reducing audit report lag. Investors will need timely published financial statements to make informed economic decisions. Audit report lag jeopardises the quality of financial reporting by not providing timely information to investors.

Several limitations should be taken into consideration to provide some guidelines for future research. Firstly, the sample used in this study is limited to firms listed on the GSE. The findings focus on these 30 firms which accounts for 90 firm-year observation after taking out firms with insufficient or incomplete data. Thus, the result might not be generalised to all firms in Ghana. It is, therefore, recommended that further research should include more firms in Ghana to enable the results to be generalised. Lastly, the data collection is only limited to the secondary data which were extracted from sampled companies' annual reports. Therefore, other methods such as in-depth interviews are proposed for preliminary study and part of information gathering for future research.

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Appendix

Operational measures utilised for the qualitative characteristics (adapted from Beest et al., 2009)

Relevance

R1 The annual report discloses forward-looking information.

R2 The annual report discloses information in terms of business opportunities and risks.

R3 The company uses fair value as measurement basis.

R4 The annual report provides feedback information on how various market events and significant transactions affected the company.

Relevance total score (4).

Faithful representation

F1 The annual report explains the assumptions and estimates made clearly.

F2 The annual report explains the choice of accounting principles clearly.

F3 The annual report highlights the positive and negative events in a balanced way when discussing the annual results.

F4 The annual report includes an unqualified auditor's report.

F5 The annual report extensively discloses information on corporate governance issues.

Faithful representation total score (5).

Understandability

U1 The annual report is a well organised.

U2 The notes to the balance sheet and the income statement are clear.

U3 Graphs and tables clarify the information presented.

U4 The use of language and technical jargon is easy to follow in the annual report.

U5 The annual report included a comprehensive glossary.

Understandability total score (5).

Comparability

C1 The notes to changes in accounting policies explain the implications of the change.

C2 The notes to revisions in accounting estimates and judgements explain the implications of the revision.

C3 The company's previous accounting period's figures are adjusted for the effect of the implementation of a change in accounting policy or revisions in accounting estimates.

C4 The results of current accounting period are compared with results in previous accounting periods.

C5 Information in the annual report is comparable to information provided by other organisations.

C6 The annual report presents financial index numbers and ratios.

Comparability total score (6).