AUDIT COMMITTEE AND INTERNAL AUDIT:
IMPLICATIONS ON AUDIT QUALITY

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ABSTRACT

The purpose of this study is to investigate the association of audit committee expertise and internal audit function characteristics, with audit quality, which is proxied by audit fee. As highlighted by prior studies, audit committee and internal audit are among the corporate governance mechanisms. Hence, among the corporate governance characteristics included in this study are audit committee expertise, frequency of audit committee meetings, structure of internal audit function and size of internal audit function. Using publicly available information, 200 Malaysian listed companies were utilised for both 2009 and 2010. It was shown that a positive relationship exists between external audit fee and two of the audit committee characteristics, i.e. audit committee with postgraduate qualification and frequency of audit committee meeting. Further, a positive relationship was found between external audit fee and a characteristic of the internal audit function, which is size of the internal audit function. Apart from contributing to the literature on corporate governance and audit quality, this study may serve as an input for regulators to encourage strict enforcement for Malaysian listed companies to incorporate corporate governance practices, especially in respect of audit committee composition and internal audit function. Finally, it highlights the call for continuous education for directors, to become more resourceful in order to improve their relationship with auditors.

JEL classifications: M41, M42

Key words: Audit committee, Internal audit, Corporate governance, External audit fee, Expertise
1. INTRODUCTION

Regulators recently highlighted the increasingly vital role of internal audit functions in supporting the audit committee to ensure the quality of financial reporting and auditing (i.e. Malaysian Code on Corporate Governance, 2007). This is due to the corporate collapses and highly publicized scandals (i.e. Enron, Worldcom, Parmalat, Transmile, Port Klang Free Zone) that have demonstrated the problems with the quality of financial reporting and auditing. These scandals have damaged investor confidence in corporate financial reports and raised doubts about the audit function. Further, the recent financial crisis, which unfolded in middle of 2008 also damaged investor confidence in financial reporting and audit quality. These highly publicized scandals and financial crisis have highlighted the critical need for regulators and firms to improve corporate governance practices. Therefore, several steps have been taken by regulators (i.e. Securities Commission, Bursa Malaysia) to reinforce the quality of corporate governance, including audit committee effectiveness, internal audit function and external audit practices.

The role of the audit committee and internal audit as the firm’s internal control mechanisms are very important to ensure the reliability of financial reporting. Audit committees have a vital responsibility to the internal audit, including reviewing the internal audit programme and ensuring the adequacy of the scope of the internal audit activities (Carcello et al., 2002). Similarly, an effective internal audit function can be a vital resource to the audit committee in discharging its duties, and thus, enhancing the effectiveness of the audit committee (Raghunandan et al., 2001; Scarbrough et al., 1998). Gramling et al. (2004) documented that the internal audit function is one of the four cornerstones of corporate governance. Corporate governance developments have emphasized and identified the internal audit function as playing a key role in assessing and improving the quality of internal control systems (Cohen et al., 2002). The revised Malaysian Code on Corporate Governance in 2007 emphasized the importance of internal audit function and mandating an internal audit function for each public-listed company. It is a critical component of high quality corporate governance (Institute of Internal Auditor, 2002) and serves to mitigate
fraud (Beasley et al., 2000), earnings management (Prawitt et al., 2009), and internal control problems. To ensure the effectiveness of good internal control mechanisms and to improve the quality of financial reporting, several researchers have argued that a good relationship between the audit committee and internal auditors is necessary (Rezaee and Lander, 1993; Harrington, 2004).

Audit committees with financial expertise are vital as they show support for the credibility of the financial statement (Burrowes and Hendriks, 2005), and the high quality of reported earnings (Qin, 2006). Moreover, having an audit committee financial expert demonstrates that they will review the internal audit programme (Read and Raghunandan, 2001), which reduces the likelihood of misappropriation of assets in publicly held companies (Mustafa and Youssef, 2010). As such, audit committees have the potential to enhance the effectiveness of the internal audit function as well as external audit practices, and this, in turn, has implications for audit quality. The purpose of this paper is to investigate the relationship between audit committee effectiveness and internal audit function with external audit fees in Malaysian public listed companies. This study adopts the demand-side (Carcello et al., 2002) perspective to examine the link between audit committee expertise and the internal audit function with external audit fees. It is expected that audit committees consisting of expert directors will be more effective and are likely to call for a broader scope of internal audit procedure, possibly by investing more in the internal audit function as well as being willing to pay a higher external audit fee to ensure higher audit quality.

The study of this relationship is important as the current focus on corporate governance has directed the attention to the roles played by the audit committee, and internal and external auditors in improving the financial reporting quality. Therefore, given the importance of corporate governance and auditing services, it is appropriate to investigate whether the corporate governance mechanisms (i.e. audit committee and internal audit) influence the audit quality of Malaysian listed companies. Malaysia was chosen for the study because the corporate governance practices used by Malaysian listed companies are different from those practised in developed markets (Yatim et al., 2006). Institutional differences exist between developing capital markets, such as Malaysia, and those of
developed markets. Most prior studies in this area provided evidence from strong and sophisticated capital market environments (Singh and Newby, 2010; Goodwin-Stewart and Kent, 2006; Abbott et al., 2003; Carcello et al., 2002; Felix et al., 2001), while there is little evidence from less developed and regulated capital markets, and where corporate governance mechanisms are still evolving. The remainder of this paper is organised as follows. The second section briefly reviews the literature pertaining to the relationship between the audit committee and internal audit with external audit fees, followed by development of the hypotheses. The data and research methodology utilized are discussed in the third section followed by an analysis of the results and discussion. Conclusions are drawn in the final section with a brief explanation of the limitations and suggestions for future research.

2. LITERATURE REVIEW

2.1 MALAYSIAN CODE ON CORPORATE GOVERNANCE (MCCG)

The Malaysian Code on Corporate Governance (MCCG), which was first issued in March 2000, marked a significant milestone in corporate governance reform in Malaysia. It codified the principles and best practices of good governance and described optimal corporate governance structures and internal processes. The recently revised MCCG 2007 highlights the importance of an effective audit committee and independent internal audit function. The revised Code emphasises the need for all public listed companies to carry out their own internal audit functions. To ensure that the audit committee serves as an effective check on the management of a company, the revised MCCG 2007 details the composition of audit committees, the frequency of meetings and the need for audit committee members to attend continuous training to keep abreast of developments in relevant financial and other related developments. In line with the revised MCCG in 2007, the Listing Requirements of Bursa Malaysia (formerly known as Kuala Lumpur Stock Exchange) were also revised. The Bursa Malaysia Listing Requirements (2008) require that all firms trading on Bursa Malaysia present a statement on the internal audit function in their annual report and comply with the requirements concerning the revised composition of the audit committee.
2.2 AUDIT FEES AND AUDIT QUALITY

The study of audit quality has received considerable attention in the literature (Chen et al., 2005). Audit quality is the fundamental element that explains the demand for auditing services. It is an essential element to ensure the credibility of corporate governance and the financial reporting process (Abdullah et al., 2008). Audit quality can be defined from various perspectives. The most prevalent definition of audit quality in the literature is the market-assessed probability that the financial statement contains material errors and the auditor will both identify and report errors and irregularities in the financial statement (DeAngelo, 1981).

Studies on audit quality are basically related to the selection of auditors. A higher quality audit is perceived to be related to the brand name auditors or industry specialist auditors (DeAngelo, 1981; Palmrose, 1986; Chen et al., 2005; Abdullah et al., 2008). They argued that the large size of audit firms, especially Big Four firms, is the best indicator of audit quality, as larger audit firms provide higher audit quality than smaller audit firms. Large audit firms are expected to have greater competency compared to small audit firms. With huge resources, big firms are capable of hiring more experienced auditors and invest in high information technology. Consequently, the staff are fit to perform high audit quality and provide better consultancy services to their clients.

However, many studies use audit fees as a proxy for audit quality since audit quality is unobservable (O’Sullivan, 2000; Carcello et al., 2002; Salleh et al., 2006; Yatim et al., 2006; Goodwin-Stewart and Kent, 2006; Mitra et al., 2007; Bliss et al., 2011). A higher amount of audit fees indicates that auditors provide more efficient audit services to the firm compared to lower audit fees. According to O’Sullivan (2000), more audit hours and more specialized audit staff are required for a more thorough investigation, which will lead to the higher audit fees. Hence, it is expected that higher audit fees indicate a higher quality audit, as more audit work is required to ensure that the financial statements are free from material misstatement (Deis and Giroux, 1996). Finally, this study utilised the external audit fee as the proxy for audit quality, consistent with O’Sullivan (2000), Carcello et al. (2002), Salleh
et al. (2006), Yatim et al. (2006), Goodwin-Stewart and Kent, (2006) and Mitra et al. (2007). Therefore, the following paragraphs are devoted to the literature review concerning external audit fees.

External audit fees may be explained from two perspectives: supply-side explanation or the demand-side explanation. In the demand-side explanation, an effective audit committee demands higher audit quality and effort, thus affecting audit fees (Carcello et al., 2002). Meanwhile, from the supply-side explanation the auditors assess the risks of the clients and thus supply different levels of audit effort in response to the assessed risks, which results in higher audit fees (Gul and Tsui, 1998). It is clearly possible for both demand and supply to occur. This study adopts the demand-side (Carcello et al., 2002) perspective to examine the relationship between audit committee effectiveness, internal audit function and external audit fees. However, it is not the main objective of the study to discuss the supply-side or demand-side of the audit fees and its relation to audit committee expertise, and, thus, it could be considered in future research.

2.3 CORPORATE GOVERNANCE MECHANISMS AND EXTERNAL AUDIT FEE

Research investigating the determinants of external audit fees has been carried out since the 1980s. Extensive empirical research documents the determinants of external audit fees in the market for audit services (Simunic, 1980; Francis and Simon, 1987; Maher et al., 1992; O’Keefe et al., 1994). Beginning with Simunic (1980), a number of studies have investigated the auditing services in several countries. Simunic (1980) documented that auditee size is the most important determinant of audit fees. Since the publication of Simunic (1980), company size appears to be the central explanatory feature when studying audit fees. For example, studies by Francis and Simon (1987), O’Keefe et al. (1994), Sandra and Patrick (1996) and Goodwin-Stewart and Kent (2006) found a positive relationship between client size and corporate audit fees.

O’Sullivan (2000) and Salleh et al. (2006) investigated the effects of governance mechanisms (i.e. board of director’s characteristics) on audit quality whereby these studies used the external audit fee as a proxy for audit quality. These studies found that the proportion of
independent directors is significantly related to audit fees. The findings of both studies suggest that independent directors encourage the appointment of higher quality auditors to give greater assurance to investors that company financial statements are fairly presented. Carcello et al. (2002) and Yatim et al. (2006) found that firms with good corporate governance attributes (i.e. independence, expertise and diligence) are associated with higher external audit fees indicating higher audit quality. Abbott et al. (2003) also found that audit committee independence and expertise are significantly positively associated with audit fees. Likewise, Goodwin-Stewart and Kent (2006) found significant positive associations between the level of audit fees and the existence of an audit committee and audit committee meeting frequency. More recently, Bliss et al. (2011) examined the relationship between audit committee independence and audit quality, and found a positive association between audit committee independence and audit fees, thus suggesting that more independent audit committees demand higher audit quality.

In relation to the internal audit and external audit, some studies suggest that internal audit and external audit are substitutes for one another (Mohamed, 2012; Ho and Hutchinson, 2010; Felix et al., 2001; Turpin, 1990). Nevertheless, other studies suggest that the two types of audit may be complementary; with an increase in both (i.e. internal audit and external audit works) when greater monitoring is required (Carey et al., 2000; Goodwin-Stewart and Kent, 2006; Singh and Newby, 2010). Companies with internal audit departments are observed to be significantly larger, more highly regulated, more competitive, more profitable, more liquid, more conservative in their accounting policies, more competent in their management and accounting personnel, and subject to better management controls (Wallace and Kreutzfeldt, 1991). Goodwin-Stewart and Kent (2006) examined the use of internal audit by Australian publicly-listed companies and found that only one-third of the sample used internal audit. The results indicate that there is positive association between the level of audit fees and the use of internal audit. This result suggests that firms that engage in greater internal monitoring also engage in greater external monitoring, and that the directors of these firms recognise the importance of both types of audit (i.e. internal
audit and external audit) in strengthening the corporate governance. Likewise, Singh and Newby (2010) found that firms with active internal audit functions have higher audit fees. The findings also imply that companies use internal audit and audit fees in a complementary way to strengthen their overall control/operating environment.

Ho and Hutchinson (2010), however, found that internal audit contribution may substitute for substantive external auditing processes, and, hence, is associated with lower monitoring costs. Thus, it is believed that external auditors in Hong Kong place greater reliance on the activities performed by internal auditors, and, consequently, charge lower fees. The findings supported the study conducted by Carey et al. (2000) who found the two methods of monitoring (internal audit and external audit) to be substitutes. Similarly, Mohamed (2012) found that both aspects of internal audit quality (competency and internal audit contribution) lend support to the substitution views for explaining the links between internal audit quality and audit fees. Using 73 survey responses from the internal and external auditors in public listed companies in Malaysia, the results of the study suggest that the competency of internal audit, namely, the age of the internal audit function (years), is associated with lower audit fees.

Further, the focus of prior studies predominantly concerns the understanding of the level of external auditor’s reliance on the internal audit work and reduction in audit fees (Abbott et al., 2012; Felix et al., 2001). In general, prior research documents a positive relation between the reliance of external auditors on the internal audit work (Brody et al., 1998; Schneider, 1985). In contrast, Felix et al. (2001) found a negative association between the external auditor’s reliance on internal audit assistance and audit fees. Further, Felix et al. (2001) indicated that the quality of the internal audit function and the extent of coordination between internal and external auditors influence the external auditor’s reliance on internal audit. Similarly, Krishnamoorthy (2002) documented that the greater the objectivity, technical competence and quality of work performance of the internal audit function, the larger the potential for internal auditors to contribute to the external audit. A more recent study by Suwaidan and Qasim (2010) indicated that external auditors in Jordan consider the objectivity, competence and work performance
of internal auditors as important factors affecting their decisions concerning reliance. However, the authors suggest that there is no relationship between the reliance of the external auditor on the internal auditor and external audit fees. The conflicting results provide an avenue for more research, particularly concerning the association between the internal audit and external audit.

While there is a wide range of studies concerning the relationship between corporate governance mechanisms and external audit fees (Stein et al., 1994; Felix et al., 2001; Carcello et al., 2002; Abbott et al., 2003; Haron et al., 2004; Yatim et al., 2006; Goodwin-Stewart and Kent, 2006; Ho and Hutchinson, 2010; Singh and Newby, 2010; Suwaidan and Qasim, 2010, Bliss et al., 2011), very little research has directly investigated or explored the relationship between audit committee characteristics and internal audit contribution with external audit fees (as a proxy for audit quality). Therefore, this study extends prior literature by directly investigating the relationship between audit committee effectiveness and internal audit function with audit quality in Malaysia.

3. THEORETICAL BACKGROUND AND HYPOTHESIS DEVELOPMENT

The agency theory and resource dependence theory (RDT) was used in this study with the assumption that the audit committee and internal audit can play a broader role to control the agency problem (management behavioural problem) and that the audit committee functions as the provider of resources to the firm (Nelson, 2010), which, ultimately, improves the audit quality of the firm. The hypotheses are developed based on the audit committee and internal audit characteristics and their relation with the external audit fees. In this study, it is expected that firms that are more committed to a strong audit committee are likely to engage in greater levels of internal audit as well as be prepared to pay for higher external audit fees (Goodwin-Stewart and Kent, 2006). The agency theory posits that agents will not act to maximize the profits of principals and that the principals have limited ability to monitor whether or not their interests are being properly served by agents (Jensen and Meckling, 1976). Thus, in order to reduce the agency costs
between the shareholders and managers, the firm may invest more in the internal audit function (Adam, 1994) and pay a higher fee for external auditors to ensure the reliability of the financial reporting and audit quality.

Whilst, under the resource dependence theory, the audit committee becomes more resourceful and the audit quality will be improved because of the different skills, knowledge, and expertise exchanged among the members (Hillman and Dalziel, 2003). Therefore, in this study, appointing more audit committee members with expertise is considered an important strategy for good financial reporting and audit quality because of their knowledge, experience and expertise whereby firms are able to extract useful resources. Therefore, it is expected that a more resourceful audit committee is likely to engage in a greater level of internal audit and external audit to ensure the good audit quality of the firm. In this study, it is expected that firms that pay higher external audit fees will provide highly reliable financial reporting and audit quality, and, accordingly, better protect the benefits and interests of the shareholders.

3.1 AUDIT COMMITTEE EXPERTISE

Knowledge and experience in accounting and finance are viewed as being among the important elements for audit committee effectiveness (DeZoort, 1998; Kalbers and Fogarthy, 1993). Many prior studies on audit committee expertise are overwhelmed by studies performed in developed countries, such as the US, UK and Australia (Engel et al., 2010; Krishnan and Visvanathan, 2009; Carcello et al., 2006; Defond et al., 2005). In Malaysia, most prior literature (Yatim et al., 2006) examines financial expertise based on the MCCG requirements or Bursa Malaysia Listing requirements, which mandate at least one audit committee member must be a member of the Malaysian Institute of Accountants (MIA). Consistent with prior literature (Nelson, 2010; Carcello et al., 2002, Carcello et al., 2006; Kim et al., 2006), this study includes two criteria as the variables of interest – the audit committee managerial experience and academic qualification in terms of postgraduate qualification.

Experience in accounting, auditing and finance, and professionally qualified or certified accountants, are the important characteristics to
be considered as an expert (Carcello et al., 2002). In addition, these characteristics are essential to further enhance the effectiveness of the audit committee. The Blue Ribbon Committee (1999) recommended that the audit committee should include at least one member with accounting or finance expertise. Financial knowledge is particularly essential since many oversight judgments are subjective and such knowledge will help the audit committee in making its financial decision. Defond et al. (2005) examined the market reaction to appointing financial experts, and documented that there is a significant and positive market reaction to the announcement of new directors with accounting financial expertise. It is also noted that accounting expertise contributes to greater monitoring by the members of the audit committee, which, in turn, enhances multiple attributes of the financial reporting quality. Likewise, Abbott et al. (2003) and Yatim et al. (2006) documented that an audit committee with accounting affiliation is significantly and positively associated with audit fees.

Further, Nelson (2010) proposed academic qualification, i.e. postgraduate qualifications, as one of the characteristics of audit committees that can enhance its effectiveness. Kim et al. (2006) suggested that formal education allows individuals to gain knowledge and skills, and earn credentials valued by others in the business community. Plus, postgraduate qualifications might help to sustain the effectiveness of the audit committee through higher audit quality.

Besides accounting affiliation and academic qualification, direct experience may well enhance the knowledge of audit committee members. Kor (2003) documented that past managerial experience contributes to the competence of the top management team. Likewise, Defond et al. (2005) and Carcello et al. (2006) noted that repetition to exposure and the extensive effects of experience increases the knowledge and skills of experts. Further, DeZoort et al. (2002) implied that audit committee members’ oversight experience and knowledge in accounting, auditing and finance make judgments more similar to external auditors than less experienced audit committee members. Accounting certification and audit committee experience are among the characteristics that are valued positively by the Board of Directors when designating an audit committee member as a financial expert.
(Iyer et al., 2013). Hence, the study expects that audit committee members with previous experience in a managerial position have a positive association with audit quality. Based on the discussion above the following hypotheses are proposed:

\textbf{H}_1: There is a positive relationship between the professional accounting affiliations of members on the audit committee and audit quality.

\textbf{H}_2: There is a positive relationship between the postgraduate qualification of members on the audit committee and audit quality.

\textbf{H}_3: There is a positive relationship between the proportion of members with experience in senior managerial positions on the audit committee and audit quality.

\textbf{3.2 FREQUENCY OF AUDIT COMMITTEE MEETING}

Regulators, among others, have often expressed a strong preference for an audit committee that meets frequently. Prior studies typically rely on the number of annual audit committee meetings as a proxy for the diligence of the audit committee because other measures of diligence are not publicly observable (DeZoort et al., 2002). The results of prior research suggest that audit committees that meet frequently are more likely to be informed of current auditing issues and be more diligent in fulfilling their duties. Carcello et al. (2002), and Goodwin-Stewart and Kent (2006) documented a positive association between the number of audit committee meetings and audit fees. This study predicts that audit committees that meet frequently are likely to be associated with a higher quality audit, which is demonstrated by a higher level of audit fees. This leads to the next hypothesis, stated in the alternative form:

\textbf{H}_4: There is a positive relationship between the number of audit committee meetings and audit quality.
3.3 STRUCTURE OF INTERNAL AUDIT FUNCTION

It is argued that firms that perform the internal audit function within their companies are less likely to be independent compared to companies that outsource their internal audit function. As they are employed and paid by the company, their level of independence may deteriorate. Further, this is due to the probability that the management of the company might influence the decision by the internal audit function, and, thus, in turn, affect the independent status of the internal auditors. Prior studies indicate that external auditors assess the internal audit as being more reliable and effective when it is independent of management influence (Margheim, 1986).

There is considerable research that examines the implications of the existence of the internal audit function. For example, using a sample from the USA, Wallace and Kreutzfeldt (1991) found that companies with internal audit departments are observed to be significantly larger, more highly regulated, more competitive, more profitable, more liquid, more conservative in their accounting policies, more competent in their management and accounting personnel, and subject to better management controls. Further, the studies by Goodwin-Stewart and Kent (2006), and Singh and Newby (2010) show that the existence of an internal audit function in a firm has a significantly positive relationship with audit fees. Therefore, the results suggest that a firm with an internal audit function also invests in higher external audit quality, as indicated by the higher external audit fees. In this study, a firm that has its own internal audit department (in-house) is presented as 1 (one) while a firm that outsources the internal audit function to a professional service provider firms is presented as 0 (zero). To test the expectation that the structure of the internal audit function influences audit quality, the following hypothesis is developed:

**H₅:** There is a significant relationship between the structure of the internal audit department and audit quality.
3.4 SIZE OF INTERNAL AUDIT FUNCTION

It is argued that the cost of the internal audit function is likely to enhance the quality of the internal audit function. For instance, a firm that has spent more on an internal audit unit is expected to cover a much greater scope of internal audit work than a firm that has invested less in an internal audit unit. The cost of the internal audit function variable is used to measure the size of the internal audit function in this study. In prior literature, Goodwin-Stewart and Kent (2006) chose the number of employees as a measure of the size of the internal audit function since this information is less confidential than the internal audit budget. The author suggested that the internal audit and external audit are complementary mechanisms within the governance framework. Thus, the above discussion leads to the following hypothesis:

\( H_6 \): There is a positive relationship between the cost of the internal audit and audit quality.

4. METHODOLOGY

4.1 SAMPLE AND DATA COLLECTION

Consistent with prior studies, this study utilised secondary data as the main source of information analysis (Yatim et al., 2006; Singh and Newby, 2010). Data from annual reports included both financial variables (relating to size, cost of internal audit function and external audit fees) and non-financial variables (concerning audit committee and the complexity of the entity). Data were gathered from the annual reports of the top 200 publicly listed companies in Malaysia (by firm size), which were listed on either the Main Board or Second Board in both 2009 and 2010. Thus, the total sample for this study is 400 companies. The sample selection process did not consider finance-related companies due to their unique characteristics and different compliance and regulatory environment with respect to financial reporting. Table 1 summarizes the distribution of the sample by industry with the majority of companies coming from the trading and services sector.
Multivariate regression analysis was used to examine the relationship between the dependent and independent variables. The following regression equation is used as the model to test the hypotheses previously discussed:

\[ EAF = \beta_0 + \beta_1ACACC + \beta_2ACPG + \beta_3ACEXP + \beta_4ACMEET \\
+ \beta_5IA + \beta_6IACOST + \beta_7REC + \beta_8SUB + \beta_9LEV + \varepsilon \]

The definition and operationalization of the dependent variable, independent variables and control variables were based on the following. The study applied one dependent variable, which is audit quality proxied by the external audit fee (EAF). Therefore, the operational definition for the audit quality in this study is defined as the total value of audit fees paid to the external auditors by the firms (Goodwin-Stewart and Kent, 2006; Gonthier and Schatt, 2007; Singh and Newby, 2010).

Six independent variables were included in the above model. The following measures were based on the previous studies (Salleh et al., 2006; Yatim et al., 2006; Goodwin-Stewart and Kent, 2006; Kim et al., 2006; Nelson, 2010; Singh and Newby, 2010). Audit committees with professional qualifications (ACACC) were measured through the
proportion of audit committee members possessing professional accounting qualifications (ACCA, etc.) or being a member of any professional accounting body (MIA, CPA, etc.) to the total number of audit committee members. Audit committees with postgraduate qualification (ACPG) were measured through the proportion of audit committee members with postgraduate qualification to the total number of directors. Similarly, audit committees with managerial experience (ACEXP) were measured through the proportion of audit committee members with managerial experience to the total number of directors. The variable of the internal audit function was a dichotomous variable that was coded as one if the company has its own internal audit department (in-house) and firms that outsource the internal audit function to a professional service provider firm were coded as zero. The size of the internal audit function was measured based on the cost of the internal audit unit. This information was gathered from the Statement of Internal Control in the annual report. Consequently, the costs were transformed into natural logarithm form to control for the skewed nature of the internal audit cost.

Two control variables were included in this research model, namely, receivables, firm complexity and leverage. The receivables were measured by the ratio of receivables to total assets, whereas the firm complexity and leverage were measured through the square root number of direct subsidiaries and total of debts to total assets, respectively.

5. ANALYSIS OF RESULTS AND DISCUSSIONS

5.1 DESCRIPTIVE ANALYSIS

Table 2 provides descriptive statistics for the variables employed in the model. Panel A presents the results for the continuous variables while panel B reports the results for the dichotomous variables. The results reveal that the external audit fees paid is in the range of RM38,000 to RM19,000,000, with an average of RM624,757. The results show significant differences compared to previous studies undertaken in the Malaysian market, such as Yatim et al. (2006), who reported that the external audit fees paid in 2003 ranged between RM5,000 and
RM6,900,000. The average of the proportion of audit committees with accounting affiliations in the sample is 0.36, ranging from a minimum of 0 to a maximum of 1. The mean proportion of audit committee members with postgraduate qualification is only 0.20. The mean proportion of audit committee members with managerial experience, which is 0.90, appears to be relatively high. The number of audit committee meetings ranges from 1 to 15. Table 2 also indicates that from the 400 samples, the average for internal audit cost is more than RM800,000 per year and only one out of four of the samples outsource their internal audit function. Out of 400 samples, 307 samples (76.7 percent) have their own internal audit department (in-house) and only 93 samples (23.3 percent) outsource their internal audit functions. The descriptive statistics also reveal that Malaysian parent companies in this sector have a maximum number of 220 subsidiaries in a group and a minimum of zero. With regard to the ratio of receivables to total assets, the average is 0.15, which ranges from 0.00 to 0.97. Meanwhile, the average for leverage is 0.25, which ranges from 0.00 to 0.82.

5.2 CORRELATION ANALYSIS

Table 3 presents the results of the Pearson correlations between the variables used in the regression. Specifically, the results show the relationship between the explanatory variables used in the multivariate regression as well as measuring the significance and the direction of the relationship. Five variables are significantly correlated with audit fees: audit committee with postgraduate qualifications, frequency of audit committee meetings, internal audit function, size of internal audit functions and firm’s complexity. The size of internal audit function and external audit fees shows the highest correlation at 0.583. The results show low coefficient correlations indicating no multicollinearity problems among independent variables, which would not jeopardize the regression results.

5.3 REGRESSION ANALYSIS

Table 4 presents the regression results of the relationship between the audit committee characteristics and internal audit function with external audit fees. The overall model is significant (p=0.000), with an adjusted
R² of 0.435. The adjusted R² is considerably lower than that reported by Yatim et al. (2006), and Salleh et al. (2006), which is 0.698 and 0.625, respectively. As expected, the majority of the corporate governance variables used in this study have a statistically significant relationship with audit quality.

As far as the corporate governance variables are concerned, audit committee with postgraduate qualification has a positively significant association with audit fees, supporting Hypothesis 2. This finding suggests that audit committees with members possessing postgraduate qualifications have a positive impact on audit quality by requiring more extensive auditing to solve any auditing issues. Similarly, the results show that the frequency of audit committee meetings has a positively significant association with audit fees, thus supporting Hypothesis 4. This finding is consistent with Yatim et al. (2006), suggesting that audit committees that meet frequently are more likely to demand higher quality audits from external auditors and seek in-depth audit coverage when facing financial reporting issues that may need further investigation. However, audit committee with accounting affiliations and audit committee with managerial experience are not significantly associated with audit fees, and, hence, the study does not find support for Hypothesis 1 or Hypothesis 3.

In relation to the internal audit function, the results found that the internal audit function does not have a significant relationship with external audit fees, and thus, H5 is not supported. However, this study finds that the size of internal audit function is positively and significantly associated with external audit fees. This result supports hypothesis 6, which posits that there is a positive relationship between the size of the internal audit function and external audit fees. The result provides additional support to the findings of Goodwin-Stewart and Kent (2006), and Singh and Newby (2010) who documented that companies use internal audit and external audit in a complementary way to strengthen their overall operating environment. However, the result contradicts the findings of Ho and Hutchinson (2010), and Mohamed (2012) who documented a negative relationship between internal audit function and external audit fee.

With regards to the control variables, the results show that receivables are significantly associated with external audit fees. The
results of this study are inconsistent with prior findings (Yatim et al., 2006 and Singh and Newby, 2010) that documented a non-significant association between receivables and external audit fees. Similarly, the results show that firm’s complexity is positively associated with external audit fees. Hence, suggesting that firms with greater complexity are more likely to ask for extensive auditing and invest in high quality audit services to help mitigate the hazards associated with this factor.

5.4 FURTHER ANALYSIS

Further analysis was conducted whereby firm size was included as one of the control variables to see the effect on the relationship between the audit committee characteristics and internal audit function with audit quality. This further analysis was performed to alleviate concerns that firm size could potentially affect the results, since most of the prior literature (i.e. Taylor and Baker, 1981; Simon et al., 1986; Francis and Simon, 1987; Simon et al., 1992; O’Keefe et al., 1994; Pong and Whittington, 1994; Anderson and Zeghal, 1994; Sandra and Patrick, 1996; Collier and Gregory, 1996; Mike et al., 1997; Goodwin-Stewart and Kent, 2006) provide consistent evidence that the size (total assets) of the client is an important variable in determining audit fees. In line with prior studies (Sandra and Patrick, 1996; Yatim et al., 2006; Goodwin-Stewart and Kent, 2006; Bliss et al., 2011), firm size is measured by the natural logarithm of total assets. As a further test (not tabled), descriptive statistics show that the total assets values vary from RM282,536,278 to RM74,081,100,000 with a mean of RM4,330,000,000. Table 5 reports the results for the pooled regression model (model 2), which include firm size as one of the control variables.

The coefficient of the size of internal audit function and external audit fee is positive and significant (0.468, p=0.00), thereby providing further support for the sixth hypothesis that firms with bigger size of internal audit function also pay for higher external audit fees. This suggests a complementary relationship between internal audit function and external audit. However, the results for the relationship between audit committee with postgraduate qualification and frequency of audit committee meetings with audit fee are not consistent with the previously reported results. The coefficient of ACPG and ACMEET, which are
### TABLE 2
Descriptive Statistics (N = 400)

#### Panel A: Continuous Variables

<table>
<thead>
<tr>
<th>Variables</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std Dev</th>
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<tbody>
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<td>190000000</td>
<td>627457</td>
<td>1437668</td>
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<td>ACACC</td>
<td>0.00</td>
<td>1.00</td>
<td>0.36</td>
<td>0.16</td>
</tr>
<tr>
<td>ACPG</td>
<td>0.00</td>
<td>1.00</td>
<td>0.20</td>
<td>0.23</td>
</tr>
<tr>
<td>ACEXP</td>
<td>0.33</td>
<td>1.00</td>
<td>0.90</td>
<td>0.17</td>
</tr>
<tr>
<td>ACMEET</td>
<td>1.00</td>
<td>15.00</td>
<td>5.26</td>
<td>1.55</td>
</tr>
<tr>
<td>IACOST</td>
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<td>17.17</td>
<td>12.61</td>
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<tr>
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<td>4330000000</td>
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<td>REC</td>
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<td>0.97</td>
<td>0.15</td>
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<tr>
<td>SUB</td>
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<td>220.00</td>
<td>19.74</td>
<td>23.24</td>
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<tr>
<td>LEV</td>
<td>0.00</td>
<td>0.82</td>
<td>0.25</td>
<td>0.18</td>
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</tbody>
</table>

#### Panel B: Dichotomous Variable

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<thead>
<tr>
<th>Variable</th>
<th>Freq</th>
<th>%</th>
<th>Freq</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>IA</td>
<td>307</td>
<td>76.7</td>
<td>93</td>
<td>23.3</td>
</tr>
</tbody>
</table>

Notes: EAF= Total value of audit fees paid to the external auditors by the firms; ACACC= The proportion of AC member with accounting professional qualification to total number of directors; ACPG= The proportion of AC member with postgraduate qualification to total number of directors; ACEXP= The proportion of AC member with managerial experience to total number of directors; ACMEET= The number of audit committee meeting held during the financial year; IA= Assigned as 1 for in-house internal audit function and 0 for outsource internal audit function; IACOST= Natural log of total cost of internal audit function; REC= Ratio of receivables to total assets; SIZE= total assets for the financial year; SUB= Number of direct subsidiaries; LEV= total of debt to total assets.
<table>
<thead>
<tr>
<th></th>
<th>EAF</th>
<th>ACACC</th>
<th>ACPG</th>
<th>ACEXP</th>
<th>ACMEEI</th>
<th>IA</th>
<th>IACOST</th>
<th>REC</th>
<th>SIZE</th>
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</thead>
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<tr>
<td>ACPG</td>
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<td>ACEXP</td>
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<tr>
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<td>0.104*</td>
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<td>IA</td>
<td>0.225**</td>
<td>0.030</td>
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<td>-0.051</td>
<td>0.056</td>
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<tr>
<td>IACOST</td>
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<td>0.039</td>
<td>0.207**</td>
<td>0.063</td>
<td>0.316**</td>
<td>0.436**</td>
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<td>-0.003</td>
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<td>-0.069</td>
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<td>SIZE</td>
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<td>0.096</td>
<td>0.625**</td>
<td>-0.270**</td>
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<td>-0.066</td>
<td>0.091</td>
<td>0.137**</td>
<td>0.326**</td>
<td>-0.113**</td>
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<tr>
<td>LEV</td>
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<td>0.021</td>
<td>-0.025</td>
<td>0.077</td>
<td>-0.158**</td>
<td>0.018</td>
<td>0.112*</td>
<td>0.150**</td>
</tr>
</tbody>
</table>

**significant at 1% level, * significant at 5% level

Notes: EAF= Natural log of total value of audit fees paid to the external auditors by the firms; ACACC= The proportion of AC member with accounting professional qualification to total number of directors; ACPG= The proportion of AC members with postgraduate qualifications to the total number of directors; ACEXP= The proportion of AC members with managerial experience to the total number of directors; ACMEEI= The number of audit committee meetings held during the financial year; IA= Assigned as 1 for in-house internal audit function and 0 for outsourced internal audit function; IACOST= Natural log of cost of internal audit function; REC= Ratio of receivables to total assets; SIZE= natural log of total assets; SUB= square root of the number of subsidiaries; LEV= total of debt to total assets.
TABLE 4
Multivariate Regression Analysis

\[ EAF = \beta_0 + \beta_1 ACACC + \beta_2 ACPG + \beta_3 ACEXP + \beta_4 ACMEET + \beta_5 IA \\
+ \beta_6 IACOST + \beta_7 REC + \beta_8 SUB + \beta_9 LEV + \epsilon \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficients</th>
<th>Significant (t-stat)</th>
<th>(p-value)</th>
</tr>
</thead>
<tbody>
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<td>(constant)</td>
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<tr>
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<tr>
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<td>0.084</td>
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<tr>
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<td>-0.814</td>
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<tr>
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<td>0.090</td>
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<td>0.025**</td>
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<tr>
<td>IA</td>
<td>-0.026</td>
<td>-0.595</td>
<td>0.552</td>
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<tr>
<td>IACOST</td>
<td>0.455</td>
<td>9.563</td>
<td>0.000**</td>
</tr>
<tr>
<td>REC</td>
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<td>2.115</td>
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</tr>
<tr>
<td>SUB</td>
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</tr>
<tr>
<td>LEV</td>
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<tr>
<td>R²</td>
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<tr>
<td>Adjusted R²</td>
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<tr>
<td>F-value</td>
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</tr>
<tr>
<td>p-value</td>
<td>0.000**</td>
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<td></td>
</tr>
<tr>
<td>N</td>
<td>400</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**significant at 1% level; * significant at 5% level

Note: EAF = Natural log of total value of audit fees paid to the external auditors by the firms; ACACC = The proportion of AC members with accounting professional qualification to total number of directors; ACPG = The proportion of AC members with postgraduate qualification to total number of directors; ACEXP = The proportion of AC members with managerial experience to total number of directors; ACMEET = The number of audit committee meeting held during the financial year; IA = Assigned as 1 for in-house internal audit function and 0 for outsourced internal audit function; IACOST = Natural log of cost of internal audit function; REC = Ratio of receivables to total assets; SUB = square root of the number of subsidiaries; LEV = total of debt to total assets.
### TABLE 5
Multivariate Regression Analysis

\[ EAF = \beta_0 + \beta_1 ACACC + \beta_2 ACPG + \beta_3 ACEXP + \beta_4 ACMEET + \beta_5 IA \]
\[ + \beta_6 IACOST + \beta_7 REC + \beta_8 SUB + \beta_9 LEV + \beta_{10} SIZE + \varepsilon \]

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficients</th>
<th>Significant (t-stat)</th>
<th>(p-value)</th>
</tr>
</thead>
<tbody>
<tr>
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<tr>
<td>SUB</td>
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<td>6.005</td>
<td>0.000**</td>
</tr>
<tr>
<td>LEV</td>
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<td>0.025</td>
<td>0.980</td>
</tr>
<tr>
<td>SIZE</td>
<td>0.468</td>
<td>9.417</td>
<td>0.000**</td>
</tr>
<tr>
<td>R²</td>
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</tr>
<tr>
<td>Adjusted R²</td>
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</tr>
<tr>
<td>F-value</td>
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</tr>
<tr>
<td>p-value</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>N</td>
<td>400</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**significant at 1% level; * significant at 5% level

*Note:* EAF = Natural log of total value of audit fees paid to the external auditors by the firms; ACACC = The proportion of AC members with accounting professional qualification to total number of directors; ACPG = The proportion of AC members with postgraduate qualification to total number of directors; ACEXP = The proportion of AC members with managerial experience to total number of directors; ACMEET = The number of audit committee meeting held during the financial year; IA = Assigned as 1 for in-house internal audit function and 0 for outsourced internal audit function; IACOST = Natural log of cost of internal audit function; REC = Ratio of receivables to total assets; SUB = square root of the number of subsidiaries; LEV = total of debt to total assets; SIZE = natural log of total assets.
0.306 and 0.215, respectively, are positive and not significant. It appears from this evidence that the effect of audit committee with postgraduate qualification and frequency of audit committee meetings on audit quality may be compromised in large firms. The contrasting results could possibly be because large companies in Malaysia may have good corporate governance practices and comply with the enforcement of MCCG. Thus, the number of audit committee members with postgraduate qualification and frequency of audit committee meetings have no significant influence on the external audit fees. All of the control variables including the results for firm size, have the expected sign and are consistent with previous studies. The adjusted $R^2$ from the model used is 53.90%.

6. CONCLUSION

The main objective of the study is to examine the relationship between audit committee characteristics and internal audit function characteristics with audit quality. The sample of companies was obtained from the Bursa Malaysia listing, for the years ended 2009 and 2010, and data was hand collected from the annual reports. Specifically, this study concentrated on audit committee expertise, frequency of audit committee meetings, internal audit function and size of internal audit function. Each variable was expected to influence audit quality and six hypotheses were developed in order to test each variable. The previous discussion shows the analysis of the results for each of these hypotheses. The results of the study generally support the hypotheses.

Three hypotheses were supported, which are audit committee members with postgraduate qualifications, frequency of audit committee meetings and size of internal audit function. The findings show that firms with a higher number of audit committee members with postgraduate qualifications and frequency of audit committee meetings are associated with higher external audit fees and indicate higher audit quality. This positive association, however, is found to be weaker and not significant when the firm size variable is included in the regression analysis. This suggests that the effect of audit committee with postgraduate qualifications and frequency of audit committee meetings on audit quality may be compromised for large firms. The findings also
show that there is a positive association between firm’s complexity and size of internal audit functions with audit fees, thus suggesting that large firms that have more subsidiaries and have active internal audit functions (i.e. high cost of internal audit function) would demand higher audit quality. However, the results show that the variable of audit committee members with accounting qualifications and managerial experience has a negative and non-significant relationship with external audit fees. Likewise, the findings also show that internal audit function has a non-significant positive relationship with external audit fees.

Overall, the results describe how external audit fees vary with audit committee characteristics, internal audit function characteristics, receivables and firm complexity. Intuitively, large companies that face higher risk will increase their organizational monitoring and ask for extensive auditing, which, in turn, improve audit quality, as shown by higher external audit fees. The nature of audit committee (i.e. audit committee with postgraduate qualifications and frequency of audit committee meetings) and the size of the internal audit function are also associated with variations in the external audit fees.

There are several limitations to this study. First, due to the different regulations for financial institutions, this research was unable to include financial institutions in the sample size and future research might consider examining these relationships in a wider capital market including various sectors. Second, the amount and type of data available might be limited since the study is based on secondary data (i.e. annual reports). Alternative research methods, such as interviews or surveys with key stakeholders, for example, internal auditors, external auditors, and audit committee members, could strengthen the findings of this study. Finally, audit quality has a broader concept and is a very subjective definition. In this study, the external audit fee was used as a proxy for audit quality, which is consistent with Salleh et al. (2006). Thus, the focus on external audit fee as a proxy for audit quality may impact the validity of the results.

From a practical perspective, legislators or policy makers (i.e. Securities Commission and Bursa Malaysia) may provide strict enforcement to public-listed companies to incorporate corporate governance practices as the findings suggest that strong corporate governance affects external audit fees, and, thus, improves the financial
reporting quality. From the findings, external audit fees are influenced by the size of the internal audit function. The results provide regulators and executives with a clearer picture of company characteristics that are associated with greater audit quality and the appropriateness of existing regulations. The regulators can consider the key features in the size of internal audit function as necessary prerequisites. Following this, the regulators can ensure that mechanisms are in place to train potential or existing directors to obtain the features of a financial expert, and thus add value to the quality of financial statements.

REFERENCES


of Practice & Theory 21, no. 1 (2002): 95–120.


