

# RELATIONSHIP BETWEEN AUDIT COMMITTEE CHARACTERISTICS, EXTERNAL AUDITORS AND ECONOMIC VALUE ADDED (EVA) OF PUBLIC LISTED FIRMS IN MALAYSIA

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## Abstract

Malaysia is a developing economy which is one of the corporate leaders in South East Asian countries. Practicing audit committee is mandatory for public listed firms in Malaysia according to Bursa Malaysia Listing Requirements as well Malaysian Code of Corporate Governance. The purpose of this paper is to examine the association between audit committee characteristics and firm performance among public listed firms in Malaysia. This study employed EVA as performance measurement tool. The sample is 75 firm year observations and covers fiscal years 2008-2010. The study found that audit committee independence is positively associated with firm performance while audit quality is negatively associated in Malaysia. Overall, audit committee characteristics have a positive effect on firm performance. This study contributes to the literature as well as in empirical evidence on audit committee characteristics and firm audit quality. The results suggest that Big 4 firms have a negative impact on value based measure in Malaysia.

**Keywords:** Audit Committee Characteristics, Audit Quality, EVA

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## 1. Introduction

The purpose of financial reports is to deliver information on the financial ground, performance corporate governance practices of a firm that is handy for investors and creditors to make investment decisions. The primary roles of the audit committee include overseeing the financial reporting process and to monitor the management, because management intends to manipulate figures for their own interest. Accordingly, external auditors play the role of giving independent opinions on financial statements of firms; if the financial statements are prepared with due care in order to avoid any material bias or misstatements. Hence, audit committee and external auditors play significant role in ascertaining the validity, acceptability and reliability of financial statements. However, due to collapse of corporate skyscrapers for instance, firms such as Enron, WorldCom and Satyam, effectiveness of audit committee and external auditors have been questioned by regulators in ensuring that financial statements are fairly stated to reduce ineffectiveness. Helen and Arnold (2011) asserted that the audit committee can play a

significant role in overseeing the audit process and helping to mediate disputes between board and the auditor.

The Bursa Malaysia Listing Requirements and the Malaysian Code of Corporate Governance (2000) recommendation for audit committee composition are aimed to lead effective committee. Consequently, this study investigates the effects of audit committee and external auditors on firms' performance based in terms of true economic profit of the firms. Number of studies reported the significance of audit committee characteristics as monitoring mechanism. Managers intend to manipulate earnings of firms for greater incentives (Wiwanya and Aim, 2008). As audit committee members and auditors are good monitors and expected to oversee the financial reporting, hence, this study contributes in investigating the effect of audit committee characteristics on firm performance based on PLCs in Malaysia.

## 2. Literature and Hypotheses

### ***Audit Committee Independence and Firm Performance***

Cadbury committee (1992) recommended establishing oversight committees including audit committee for the auditing of financial statements and appointment of directors which are supported by agency theory. It considered board committees were an additional control mechanism that increased accountability; thereby enhance the assurance that the interests of the shareholders were being safeguarded. Cadbury committee report (1992) stated that audit committee should be staffed by non-executive directors, because of their independent view on important decisions. Outside directors are believed to ensure decisions made by the executive directors are in the best interest of the principals (shareholders) (Cotter et al., 1997; Weisbach, 1988; Weir and Laing, 2001). And a good audit committee practicing good accounting can ensure effectiveness in an organisation (Joseph et al., 2011). Good audit committee is defined in terms of financial expertise of committee members and their independence while good accounting is defined as less earnings management or the absence of fraudulent financial reporting and restatements. Hence, auditor's independence is cornerstone for auditors and crucial element in corporate reporting process and key prerequisite which adds value to audited financial statements (Ping et al., 2011). Helen and Arnold (2011) emphasised on audit committee strength which can have big impact on audit process and internal control. Jeffrey et al., (2011) audit committee independence is significant in ensuring the integrity of the financial reporting process. This is because management may tend to manipulate the accounts for their self interest, whereas an independent audit committee is the one which can ensure the fairness of the financial reporting.

Bursa Malaysia (Kuala Lumpur Stock Exchange) enacted that the PLCs are required to establish an audit committee since 1<sup>st</sup> August 1994. Section 344A (2) of the Bursa Malaysia Listing Requirement requires audit committee to consist a minimum of three members, a majority of which must be non-executive directors. In code (PARA 15.10 (1) (i) (c) & 15.16 (3) (c)) it states that the committee should form with at least three members from whom majority are to be non-executive directors. Malaysian code on corporate governance (2001) requires companies to have audit committee. The code (Part 2, AA III) states that the committee composition must have at least one-third independent non-executive directors. Malaysian code on corporate governance (Revised 2007) requires the companies to form an audit committee of at least three members, among whom majority are independent.

Studies in Malaysia found that audit committee composition is important, which affect firm performance. The main functions of an audit committee are to meet regularly with the external and internal auditors to review the financial statements, audit process and internal controls of the firm. This helps to lessen agency problems by the timely release of unbiased accounting information by managers to shareholders and others who rely on such information for making decisions, thus reducing information asymmetry between insiders and outsiders. Existence of audit committee is considered while making investment in company. There is an undue impact of audit committee composition on the firm performance (Saleh, Iskander and Rahmat, 2007). Saleh, Iskander and Rahmat (2007) concluded that from Malaysian context, companies should establish 100% audit committee independence from the management. It further stated that audit committees in firm should possess three qualities i.e.:- majority of members are independent, a high proportion of the members possess accounting knowledge and lastly, high frequency of meeting. All these three qualities are expected to improve the monitoring function of the committee. Malaysian boards' sub-committees are dominated by non-executive directors (Abdullah, 2001).

Klein (2002) argued that in order to produce unbiased financial reports, audit committee members are appointed to act independently in order to resolve conflicts between the managers and outside auditors. When situation comes where alternative accounting procedures need to be chosen, conflict may arise between managers and outside auditors. Beasley et al., (2000) suggests that financial statement frauds are more likely to occur in firms with lesser-audit committee independence.

Zainal et al., (2009) found that a higher proportion of independent non-executive directors enhance firm performance, due to their diverse background, attributes, characteristics and expertise, which may improve decision making processes. Non-executive directors are thought to be in a better position than executive directors to fulfil their monitoring function because they are independent and concerned with maintaining their reputation in the external labour market (Fama and Jensen, 1983). Consistent with this proposition, a positive relation is expected between firm performance and proportion of non-executive directors on the audit committee. Ameer, Ramli and Zakaria, (2010) concluded that firms with outside directors is expected to possess a better performance compared to those firms that have a majority of insider executive and affiliated non-executive director in the audit committee. The same was found by Wild (1994). In order to minimize agency problems, because of the independence compared to executive directors, non-executive directors are empowered to do better job in monitoring and controlling the management, hence

resulting improvement in firm performance (Walsh and Seward, 1990).

Chouchene (2010) summarised that the presence of independent directors in the committee composition is more important. Byrd and Hickman, (1992) claimed that the greater the proportion of non-executive directors, the better the stock market response to a firm's tender offer for other firms, while Bonn (2004) found that there is positive relationship between ratio of non-executive directors and firm performance. The same result was found by Rosenstein and Wyatt (1990), Hossain et al., (2001), and Aggarwal et al., (2007). A notable review study based on 250 papers conducted by Joseph et al., (2011) concluded that governance mechanisms in terms of good audit committee is negatively associated with fraud.

However there are also evidences, those found there is negative relationship between the outside (independent non-executive) directors in the audit committee and performance. Franks et al., (2001) and De Jong et al., (2005) concluded that the percentage of independent non-executive directors in the audit committee is associated negatively with the firm performance, while Dechow et al., (2010) concluded that firms with a minority of outside directors and with no audit committee are more likely to commit fraud than firms in the same industry and of similar size, but with a majority of outside directors and an audit committee.

Relying on the above discussion, corporate governance claims that the audit committee should consist of non-executive directors. Therefore, based on the arguments above, following hypotheses are developed to be tested:

$H_0$ : There is no relationship between the number of independent non-executive directors in the audit committee and firm performance;

$H_1$ : There is a relationship between the number of independent non-executive directors in the audit committee and firm performance.

### **Audit Committee Meeting Frequency and Firm Performance**

Best practice stated that audit committee meeting should be held at least once a year without the presence of executive board members. However, the total number of meetings depends on the company's terms of reference and the complexity of the company's operation. On the other hand, Malaysian Code on Corporate Governance (2000) suggests that at least three or four meetings should be planned to correspond to the audit cycle and the timing of published annual reports in addition to other meetings in response to circumstances that arise during the accounting year.

Empirical evidences shows that the audit committee meeting frequency plays a significant role in mitigating various issues including the agency

problem ultimately influencing the firm performance, though there are mixed findings on this issue (Wiwanya and Aim, 2008; Anthony, 2007; Saleh et al., 2007; Rashidah, 2006; Xie et al., 2003). Studies in Malaysia found that audit committee meeting frequency is another significant mechanism, which affects firm performance (Saleh et al., 2007; Rashidah, 2006). The main functions during the audit committee meeting is overseeing the firms' financial reports, internal accounting control, the audit process and more recently, its risk management practices. In order to pursue these functions, audit committee is to meet regularly with the external and internal auditors to review the financial statements, audit process and internal controls of the firm. Another important issue to bring in to the audit committee meeting is the quarterly results and year-end financial statements.

There are number of research conducted on relationship between audit committee meeting frequency and the firm performance. Empirical evidences on meeting frequency and firm performance is unclear as there are mixed findings. Vafeas (1999) found positive relationship between meeting frequency and firm performance, which is due to influence of meeting on board members. This finding was subsequently supported by Anthony (2007). This research found that the frequency of audit committee meetings (activity intensity) has a positive and significant relationship with market based performance measure of Tobin's q but seems to have no relationship with return on asset (ROA) which is an accounting based performance measure. The positive effect on Tobin's Q is apparently driven by the South African and Nigerian samples conducted by Anthony (2007). It could be due primarily to the fact that audit committees are generally perceived to serve the interest of shareholders and the public at large. Thus, when they meet frequently it further reaffirms the position of the organization in dealing with transparency and working to promote shareholder value.

Morrissey (2000) suggests four meetings in a year for audit committees. It further claims that best quality of financial reports can be assured, if four sittings are held during the year. Also, it has been argued by Menon and Williams (1994) that for audit committees to be effective monitors, it is not enough just to be independent and that they must be active. Active could be measured by the frequency of their meetings. Interestingly, the frequency of audit committee meetings has a significant negative effect on ROA in the Ghanaian sample (Menon and Williams, 1994).

Evans et al., (2002) found that there is a poor firm performance by significantly increasing board meeting frequency. This could be due to the increased costs for holding frequent meeting as well as the reverse in changes of decision taken in earlier meetings. In subsequent research, Anderson et al., (2004) found that there is a negative relationship

between costs of debt and audit committee meeting frequency, whereas Rebeiz and Salameh (2006) found there is no relationship between audit committee meeting frequency and firm performance. The finding was subsequently supported in research conducted by Sharma et al., (2009). This research found that the number of audit committee meetings held is negatively linked with multiple directorships, audit committee independence, and an independent audit committee chair.

Companies generally report the number of board meetings in the proxy statement, and take this as a measure of board activity. The audit committee is responsible for monitoring financial performance and reporting, and having outside corporate members is associated with this committee's ability to monitor. The number of audit committee meetings has a significant negative coefficient (Rashidah and Mohamad, 2006). On the other hand, Saleh et al., (2007) argued that audit committee with small number of meetings is less likely to possess good role of monitoring. These results are as expected, and imply that a more active audit committee is associated with a reduced level of discretionary currently accruals (Xie, et al., 2003). Due to the mixed results between these two variables, this study developed two hypotheses which are as follows:

$H_0$ : There is no relationship between the audit committee meeting frequency and firm performance;

$H_2$ : There is a relationship between the audit committee meeting frequency and firm performance.

### **Financial Expertise of Audit Committee Members**

The Blue Ribbon Panel (1998) concerned on audit committee knowledge and financial expertise as it can affect their effectiveness. The panel states that members of audit committee should be financially expert; as a result it can affect the monitoring process and possible financial fraud. Financial literacy appears to be more effective in diversified firms and in firms with mandatorily established audit committees (Yoon et al., 2012). It further states that the term "financial literacy" can be used to describe financial background more loosely than financial expertise. Joseph et al., (2011) asserted that audit committee accounting expertise appears to be valued by investors.

The Sarbanes Oxley Act of (2002) (SOX) imposes, in the U.S. a number of corporate governance guidelines for all public listed firms, particularly, it stipulates that the board to be composed of the majority of independent directors and in addition, the audit committee consists entirely of independent directors in which at least one financial expert is included in the audit committee.

Malaysian Code on Corporate Governance (2000) states that audit committee members should have sufficient understanding of financial issues.

Bursa Malaysia Listing Requirements, Chapter 15.10 sub-section 1 (c) stipulates that at least one member of the audit committee must be a member of the Malaysian Institute of Accountants (MIA) or if he or she is not a member of MIA, it must have at least three years' working experience. It further states that otherwise, the member must have passed the examinations specified in Part I of the first Schedule of the Accountants Act 1967 or the individual must be a member of one of the associates of accountants specified in Part II of the first Schedule of the Accountants Act 1967.

McDaniel et al., (2002) argue that financial reporting quality becomes better, if audit committee members are financially literate. Xie et al., (2003) claim that financially literate audit committee members are able to better understand the accounts and monitor the financial system in firms. Davidson et al., (2004) found that there is positive relationship between financially literate audit committee members and firm performance. This finding is confirmed in subsequent research (Mir & Souad, 2008). This is explained as with financial expertise complements strong governance which helps to enhance shareholder wealth, through increased monitoring the management as well as the accounting policies. Defond et al., (2005) pointed that audit committees may complement strong governance to enhance shareholder wealth. Jaime & Micheal (2013) concluded that financial expertise of audit committee is important because it audit committee is responsible for financial reporting process. Authors further claimed that audit committees with financial expertise can offer significant value to the client, since their financial knowledge is advantage of detecting any manipulation.

However, the expertise of audit committee members in accounting and/or financial management is positively related to the quality of financial reporting and timeliness (Krishnan, 2005; Saleh et al., 2007; Zhang, Zhou & Zhou, 2007; Krishnan & Visvanathan, 2008). Accordingly, Raghunandan and Rama (2007) asserts that having experienced members on the audit committee contributes to significantly less misreporting and more effective monitoring. Earlier empirical evidence claims that greater independent director with experience and audit knowledge results with more reliable reports (Dezoort, 1998). There was a contradictory opinion about the relationship between audit committee and the earnings management. Rashidah & Mohamed (2006) found that the audit committee members with experience in financial institutions are effective monitors in reducing earnings management. This study further added that audit committees have an insignificant role in preventing the incidence in listed companies in Malaysia has yet to achieve success in its monitoring role.

The Malaysian Code on Corporate Governance follows the Listing Requirement of Bursa Malaysia

that audit committee will comprise at least three directors. If there is any intention to manipulate the financial statements, it is unlikely that firm will comprise their audit committee with members who have financial expertise. Financial reporting quality is better when financial experts being part of the audit committee. It is because members of audit committee with financial experience and training are expected to be able to understand the earnings management and act accordingly. Hence based on two sided discussion above, this study hypothesised:

$H_0$ : There is no relationship between financial expertise of audit committee members and firm performance;

$H_3$ : Audit committee members with financial expertise are associated with firm performance.

### **Audit Committee Size and Firm Performance**

In addition, this study also includes audit committee size as audit committee size is likely to have significant effect on firm performance. Accordingly, the Code of Corporate Governance (2000) also requires the audit committee to be comprised of at least three members. However, Saleh et al., (2007) raised question whether larger audit committee can result effective monitoring or not. There are number of studies reported positive relationship between board size and firm performance. Dalton et al., (1999) found a positive association between size and monitoring process of the board that result in higher performance, whereas Saleh et al., (2007) asserted that audit committee with more members likely to possess diverse skills and knowledge which is likely to enhance monitoring. This finding was subsequently supported by Mir & Souad (2008).

Raghunandan & Rama (2007) argued that the size of audit committee increases the number of meetings. This increase in meeting frequency is argued to provide more effective monitoring and hence better firm performance. In contrast, Belkhir (2008) claimed that size is unlikely to have any effect on firm performance.

On the other hand, Vafeas (1999) argued that larger audit committee can lead to inefficient governance, because of yielding frequent meetings which leads to increased expenses. Hence, larger audit committee can negatively affect firm performance. This study was based on the US firms. Because of such mixed empirical findings, this study hypothesised:

$H_0$ : there is no relationship between audit committee size and firm performance;

$H_4$ : there is a relationship between audit committee size and firm performance.

### **Audit Quality and Firm Performance**

Audit quality is also considered to have effect on firm performance (Ping et al., 2011) where, Becker et al., (1998) measured audit quality in terms of audit firm size. Brian et al., (2012) emphasised on audit partner's rotation in order to increase the audit quality. Furthermore, authors claimed that audit quality depends on audit partners. The Big 4 or non-Big 4 firms have been used as proxy for quality auditors, because quality auditors are more likely to restrict on fraud and account manipulation (Francis et al., 1999; Kim et al., 2003). Among all the audit firms Big 4 auditors possess the substantial market share on Malaysian public listed firms including other countries. Hence, to retain their reputation and increase market share, Big 4 auditors are more likely to be mean and stricter on accounting fraud and manipulation. Jaime & Micheal (2013) found that dark periods are shorter for the firms those employ by Big 4 auditors.

Wiwanya & Aim (2008) claim that client of Big 4 auditors are less likely to have errors and irregularities in their accounts. Accordingly, Francis et al., (1999) claimed that even though the clients of the Big 4 have higher level of total accruals, they have less estimated discretionary accruals. Hence this study developed the following hypotheses:

$H_0$ : Audit quality possesses no significant effect on firm performance;

$H_5$ : Audit quality possesses positive effect on firm performance.

## **3. Methodology And Research Design**

### **Data Description**

Sample includes 32 Sarawak based companies listed in the Bursa Malaysia. The years from 2008 to 2010 were selected. In addition, the Securities Commission issued an improved code by enhancing and revising some specific paragraphs in Part of the Best Practices in Corporate governance. One of these paragraphs is on audit committee composition. Revised code on Corporate Governance was launched on 1<sup>st</sup> October 2007. Therefore this study intends to explore the performance of after the launch of revised code of corporate governance in Malaysia. We employ financial and non-financial data on a sample of 32 listed companies on the Bursa Malaysia Stock Exchange. In addition, this study also depends on Bursa Malaysia website ([www.bursamalaysia.com](http://www.bursamalaysia.com)) and newspapers for their electronic data. Here it is noteworthy to mention that selection of the 32 companies are Sarawak oriented and based on convenience and data were elicited from the annual financial report based on what governance variables were convinced. In this study, performance variable Economic Value Added (EVA) was largely computed based on the companies' annual financial report

downloaded from Bursa Malaysia website. However, most of governance variables were also obtained from the audited annual financial report. The reason behind using annual financial reports for data collection is that the reports are audited, have been published reports that are publicly available. In addition, data can be accessed through Bursa Malaysia website. Furthermore, annual reports of PLCs are presented uniformly and data is subject to comply with Bursa Malaysia regulations and companies act 1965. Companies that were sampled covered the industrial, manufacturing, agricultural, financing and service sectors.

This study begins with the identification of the population of the study, which includes the sample firms listed on Main market and second board of Bursa Malaysia. There were 843 companies listed in main market on Bursa Malaysia as at 31 December 2011. From 843 companies 32 companies are based on Sarawak which is the biggest state in Malaysia. However, due to incomplete financial and corporate governance data number of companies was reduced to 25 from 32. Final list of the sample contains 25 PLCs for this study, and totally 75 observations for three consecutive years. PLCs were selected because of their publicly published annual reports which are available on Bursa Malaysia website. In addition, annual reports are prepared and presented in a uniform way as the data presentation is subject to be complied with Companies act 1965, Bursa Malaysia regulations and corporate governance. Data on audit committees' characteristics and audit quality are obtained from company's annual financial report published in Bursa Malaysia web site.

### **Measuring EVA**

Ratios appear to be widely used in Malaysia. However, ratios are not able to measure and capture the value created on shareholder's investment (Abdullah, 2004). In fact, Issham (2011) claims that Malaysia is suffering from having a suitable performance measurement tool which can help the investors to assess value created on their investment. As a contribution, this study has been inspired to employ a value based performance measurement tool, hence selected EVA for this study.

This study measured the economic profit of Sarawak based public listed companies. EVA is "a measurement of the true economic profit generated by a firm" (Sharma & Kumar, 2010; Stewart, 1994, pp. 73) and is calculated by comparing a firm's net operating profit after tax (NOPAT) to the total cost all its forms of capital which includes debt as well. If NOPAT exceeds the cost of capital, it gives a positive EVA and vice versa. The word capital includes all the assets invested in the firm taking into consideration the deduction of the current liabilities which are not entitled to any interest from those assets and the equity.

This study employs two methods. Firstly, proposed study will calculate EVA of selected public listed companies in Malaysia. Adjustments will be made on financial data (Stewart, 1991). Though 164 adjustments are suggested, only 15-25 are adjusted due to lack of information and data availability. This number is as few as five are made in real life business (Mouritsen, 1998; Stern, Stewart & Chew, 1997; Yong, 1997). In fact, depending on the industry, firm is operating in; firms might not be required to make any adjustment in calculating EVA (Hoque, Akter & Shil, 2004). However, this study intends to make as many as adjustments possible based on data availability at the same time.

This study used the model which is proposed by Stewart (1991) to calculate EVA. Proposed model is as follows:

$$EVA = NOPAT - (WACC \times Invested\ Capital) \quad (1)$$

WACC stands for weighted average cost of capital. Capital charges are calculated by multiplying the cost of debt and cost of equity WACC with the company's invested capital. This generates unadjusted form; EVA is equivalent to what generates by subtracting cost of capital from net income and that is called economic profit which is residual income from accountant's perspective (Young, 1997). The only difference between EVA and residual income are solely the accounting adjustments based on company's generally accepted accounting principles based financial statements.

### **EVA Formula and Calculation**

Stewart (1991) stated that EVA is the deduction of cost of capital from NOPAT. In this calculation, firms are required to make as many as adjustments possible based on the accounting figures from financial statements. EVA model proposed by Stewart (1991) requires following number of steps in order to figure out EVA. The steps are mentioned below:

#### **Gathering Required Data**

EVA is calculated based on financial data of firms where income statements, balance sheet, cash flow statement and other financial notes are available. All the annual reports were collected from Bursa Malaysia website. A total of 32 selected PLCs were taken as sample based on Sarawak.

#### **Adjustment and NOPAT**

NOPAT is a measure of the company's operating profit. However, before arriving NOPAT, it requires to make as many as adjustment possible on accounting figures based on data availability (Young, 1997). Therefore, this study made adjustments on depreciation, interest expense, and goodwill. NOPAT

is also called as earnings before interest and tax (EBIT). Operating income is calculated by subtracting all operating expenses (cost of sales, selling, general and administrative expenses) from sales. Finally after deducting tax from EBIT, it generates NOPAT (Yahaya & Mahmood, 2011).

**Invested Capital**

Invested capital is the sum of money invested in a firm. There are more than one approaches proposed in calculating invested capital (Young & O’Byrne, 2001). However, this study used the formula proposed by Young & O’Byrne (2001) as follow in order to calculate invested capital.

$$Invested\ capital = total\ debt\ (short-term\ debt + long-term\ debt) + total\ equity \quad (2)$$

**Cost of Debt**

EVA requires calculation of cost of debt in order to consider the tax benefit of debt. The study stated that the portion of interest is exposed in income statement and subtracted from taxable income before it calculated tax liability, whereas cost of debt is calculated on after tax basis and cost of equity is calculated on before tax basis.

Recent study argued that the determination of cost of capital should be based on marginal borrowing rate. However in real life, it is difficult to identify the marginal rate as firms generate debts from more than one source for different purpose with different interest rates. This is because the firm might have good relation with the lenders or banks, who are willing to issue loan on lower interest charges. Therefore, in order to make the calculation more realistic this study has decided to find the average interest rate for each company based on their different terms of loan.

$$Cost\ of\ debt\ (K_d) = average\ interest\ rate * (1 - Tax) \quad (3)$$

**Cost of equity capital**

Stewart (1991) asserted that investment of money in firms has opportunity cost that shareholders forgo by making the investment in and the opportunity cost is represented by cost of capital. Measuring cost of capital is relatively difficult as there are arguments against and for cost of capital. However, Roztocki & Needy (2008) proposed a formula in calculation of cost of capital. The formula as below:

$$Cost\ of\ capital\ (K_e) = Risk\ free\ rate + Risk\ premium \quad (4)$$

Risk free rate refine as: - Return and risk models, in finance start off with an asset. Risk free rate is nothing but the investors expect the return on that asset investment. However, there is always risk on investment, either its low or comparatively more. Expected returns on risky investment are measured relatively risk free rate based on the expected risk premium that is added to the risk free rate. The variance in actual returns and the expected returns are used for the view of risk in finance.

However, its only government who possess the control on the currency printing, hence that is the only securities those have chance of being risk free. Liebenberg (2004) suggested the average return on government security for risk free rate. Therefore, this study employed interest rates of treasury bills issued by bank Negara Malaysia in order to determine the risk free rate.

Risk premium reflects the risk which results from investing in the equity of a firm. Roztocki & Needy (2010) stated the level of risk a company bearing depends on the ability to repay their current liability. The term current liability was used because, long term debt may not the concern as firms can finance for the long term liability through various sources. However, for short-term debts cash flow is the source to repay. Therefore, the level of risk premium a firm bearing depends on their net cash held at the end of the year to repay their debt. Roztocki & Needy (2010) suggested several risk premium ranges depending on investment risk which are tabulated in Table 1.

**Table 1.** Risk Premium Range

<b>Investment Risk</b>
Extremely low risk, established profitable company with extremely stable cash flows
Low risk, established profitable company with relatively low fluctuation in cash flows
Moderate risk, established profitable company with moderate fluctuation in cash flows
High business risk

Source: Rozkocki & Needy (2010)

The fluctuation of cash flow is estimated by looking at the result of the cash and cash equivalents held at the year-end of financial statement. According

to Roztecki & Needy (2010), investment bears extremely low risk and suggested risk premium is 6 per cent of less for that specific company, if the cash

flow of the company is extremely stable. The company which has low fluctuations in cash flow is categorised as in the risk premium level in between 6% and 12%. Accordingly, the company that possesses moderate fluctuation in cash flow has been labelled between 12% and 18% of risk premium. Finally, the riskier investment with vulnerable cash flow has been categorised as the high business risk premium with 18% and above.

**Cost of Capital**

Sharma & Kumar (2010) argued that if the firms are unable to identify true cost of capital, they actually destroy value, as they generate less than the total cost of capital. In real life, firms usually do not realise true cost of capital. Firms, employing traditional performance measures, are healthy in terms of profitability, as they fail to measure costs for capital. However in reality, those firms are unlikely to create value to the shareholders’ investment. The most common two types of capital employed by firms are borrowed loan and equity. Cost of borrowed loans is interest charged on those loans provided by the lenders, whereas equity capital is provided by shareholders (Yahaya & Mahmood, 2011).

Therefore, this study used the following formula to calculate WACC:

$$WACC = [K_d \times Debt / (Debt + Equity)] + [K_e \times Equity / (Debt + Equity)] \quad (5)$$

**Economic Value Added (EVA)**

EVA results is interpreted according to Stewart (1991)

$$EVA > 0$$

This term depicts that return on invested capital is higher than the cost of capital. In other words firm has created true profit leading to increase in shareholder value.

$$EVA < 0$$

On the other hand, the above term presents that return on invested capital is lower than the cost of capital. In other words, firms who generated lesser EVA than the cost of capital created negative true profit for and hence destroyed shareholders wealth.

**Regression Model**

This study developed the following regression model to examine the association between audit committee characteristics audit quality and firm performance:

$$EVA = \beta_0 + \beta_1 ADIN + \beta_2 ACEX + \beta_3 ACMF + \beta_4 ACSX + \beta_5 ADQU + \epsilon$$

**Table 2. Variables Measurement**

Economic Value Added (EVA)	
Audit Committee Independence (ADIN)	number of independent directors held in audit committee
Audit Committee Meeting Frequency (ACMF)	number of meetings held by audit committee members
Audit Committee Size (ACSX)	number of members held in audit committee
Audit Committee Expertise (ACEX)	number of financial/accounting expert held in audit committee
Audit Quality (ADQU)	whether the firm auditor held by Big 4 or non-Big 4 (indicator variable valued at 1 if the auditor is held by Big 4 firms, otherwise 0)

- EVA = economic value added;
- ADIN = number of independent directors held in audit committee;
- ACEX = number of financial/accounting expert held in audit committee;
- ACMF = number of meetings held by audit committee members;
- ACSX = number of members held in audit committee;
- ADQU = whether the firm auditor held by Big 4 or non-Big 4 (indicator variable valued at 1 if the auditor is held by Big 4 firms, otherwise 0).

**Descriptive Statistics**

Table 3 depicts descriptive statistics results for the variables employed in this study. The mean EVA is 0.03 of total invested capital. Results reports that the mean independent members in audit committee is 3.35 with 2 and 5 minimum and maximum audit committee members held in PLCs in Malaysia. Accordingly, mean audit committee meeting frequency is 5.07 which greater than the Malaysian code of corporate governance. Average audit committee size in Malaysia is 3.44, whereas the code of corporate governance states it’s to be minimum 3.



**Table 3.** Descriptive Statistics

	Minimum	Maximum	Mean	SD
Audit Committee Independence	2	5	3.35	0.67
Audit Committee Meeting Frequency	2	10	5.07	1.30
Audit Committee Size	3	5	3.44	0.62
Audit Committee Expertise	1	4	2.09	0.68
Audit Quality	0	1	0.89	0.31
EVA	-0.89	0.35	0.03	0.15

Note: the figures have been changed to two decimal places. SD stands for standard deviation

Mean number of members sitting in audit committee with accounting/ financial knowledge is 2.09; while code of corporate governance and Bursa Malaysia Listing Requirements state that the minimum one member must possess financial/accounting knowledge in the audit committee. The result shows that average 89% PLCs employ Big4 accounting firms as their external auditors while only 11% PLCs employ non-Big4 as their external auditors in Malaysia.

### Regression Results

Table 4 shows the regression results where dependent variable is EVA. The model is significant with F-value of 6.240 while  $p < 0.00$ . The model is moderate with adjusted R square of 26.1% which is consistent with prior research (Xie et al., 2003; Saleh et al; 2007; Rashidah 2006).

**Table 4.** EVA as Dependent Variable

Variables	Coefficient (Std Error)	t-Statistic (Prob.)
Audit Committee Independence	0.248 (0.049)	5.032 (0.000)
Audit Committee Meeting Frequency	0.002 (0.012)	0.134 (0.894)
Audit Committee Size	0.249 (0.054)	4.608 (0.000)
Audit Committee Expertise	0.039 (0.030)	1.287 (0.202)
Audit Quality	0.184 (0.053)	3.468 (0.001)
Observation	75	
R-square	0.311	
Adj. R-square	0.261	
F-statistics	6.240	
Prob. (F-stat)	0.000	

The coefficient results show that there is positive relationship between audit committee independence and firm performance in terms of EVA with F-value of 5.032 while  $p < 0.000$ . This result is consistent with Saleh et al., (2007) where the study concluded that there is positive relationship between audit committee independence and firm performance. Hence this study rejects the null hypothesis ( $H_0$ ), accepting the alternative hypothesis ( $H_1$ ) which states that there is a relationship between audit committee and firm performance based on PLCs in Malaysia.

However the result for audit committee meeting frequency shows that there is no association with firm performance with F-value of 0.134 and  $p > 0.894$ . This result is consistent with Rashidah & Mohamed (2006) where the study found that there is no relationship between audit committee meeting

frequency and firm performance. This could be due to the increased amount of expenses incurred due to the greater number of meetings held. Therefore, this study rejects the alternative hypothesis ( $H_2$ ), of a relationship between audit committee meeting and firm performance in term of EVA.

The coefficient results also show that accounting/financial experts sitting on the board does not influence the firm performance in Malaysia with F-value of 1.287 and  $p > 0.202$ . The same finding was concluded by Rashidah & Mohamed (2006). However, previously held study by Beasley (1996) concluded that financial expertise and experience helps in reducing discretionary accruals, which contradicts with the results in this study. Hence the study concludes that there is no association between accounting/financial experts sitting in audit committee

and firm performance and accepted the null hypothesis ( $H_0$ ).

On the other hand, audit committee size coefficient results provide that there is a negative relationship with firm performance with F-value of 4.608 and  $p < 0.000$ . This finding is consistent with the earlier study held on audit committee characteristics and firm performance (Saleh et al., 2007; Rashidah & Mohamed, 2006; Anthony 2007). Hence based on the above results this study accepts the alternative hypothesis ( $H_4$ ) which states that there is a relationship between audit committee size and firm performance.

The last independent predictor is audit quality employed in this study. The results depict that the F-value is 3.468 and  $p < .001$ , where it specifies that there is a negative relationship between audit quality and firm performance in terms EVA in Malaysia. Hence the study accepts the alternative hypothesis ( $H_5$ ).

## Conclusions

This study aimed to examine the relationship between audit committee characteristics and firm performance in terms of EVA based on selected PLCs in Malaysia.

The study found significant association between audit committee characteristics and firm performance and also with audit quality. However, the study reports that not all the audit committee characteristics are associated with firm performance. Meeting frequency and accounting and financial expertise of audit committee members do not possess any influence on firm performance.

Moreover, the study also aimed to examine the compliance of code of corporate governance and Bursa Malaysia Listing Requirements by PLCs in Malaysia in terms of audit committee characteristics. The code states that the majority of the members are to be independent in audit committee, there should be minimum of 3 members in audit committee composition, at least one member should possess accounting or financial knowledge which could be measured in terms of their professional degree and minimum 4 meetings should be held by the audit committee members in an accounting year. In response to these requirements, this study found that the PLCs in Malaysia comply with code of corporate governance and Bursa Malaysia Listing Requirements (Table 2).

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