INTERNAL MONITORING MECHANISMS AND EARNINGS QUALITY: EMPIRICAL EVIDENCE FROM MALAYSIA

AHMED HUSSEIN AL-RASSAS

DOCTOR OF PHILOSOPHY
UNIVERSITY UTARA MALAYSIA
NOVEMBER 2015

INTERNAL MONITORING MECHANISMS AND EARNINGS QUALITY: EMPIRICAL EVIDENCE FROM MALAYSIA

By

AHMED HUSSEIN AL-RASSAS

Thesis Submitted to
School of Accountancy,
Universiti Utara Malaysia,
in Fulfillment of the Requirement for the Degree of Doctor of Philosophy

CERTIFICATION OF THE THESIS WORK

CERTIFICATION OF THE THESIS WORK

PERMISSION TO USE

In presenting this thesis in fulfilment of the requirements for a Post Graduate Degree from the Universiti Utara Malaysia (UUM), I agree that the Library of this university may make it freely available for inspection. I further agree that permission for copying this thesis in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor, Assoc. Prof. Dr. Hasnah Kamardin or in her absence, by the Dean of School of Accountancy where I did my thesis. It is understood that any copying or publication or use of this thesis or parts of it for financial gain shall not be allowed without my written permission. It is also understood that due recognition given to me and to the UUM in any scholarly use which may be made of any material in my thesis.

Request for permission to copy or to make other use of materials in this thesis in whole or in part should be addressed to:

Dean of School of Accountancy, College of Business
Universiti Utara Malaysia
06010 UUM Sintok
Kedah Darul Aman

ABSTRACT

Earnings quality reflects the integrity and quality of financial reporting which minimizes the information asymmetry and agency conflicts among management, owners, and majority and minority shareholders. The issue of earnings quality has become a concern, especially in respect of corporate governance as an internal monitoring mechanism to ensure the financial reporting quality. The objective of the study is to examine the relationship between internal monitoring mechanisms, namely, board of directors, audit committee, internal audit function, and earnings quality based on agency theory and resource dependence theory. Furthermore, this study examines the moderating effect of audit committee between the internal audit function and earnings quality. The sample of the study is 2,036 firm-year observations on the Main Market of Bursa Malaysia for the period of 2009 to 2012. Two discretionary accruals models were used to measure earnings quality. This study reveals that board size, audit committee financial expertise, investment in internal audit function, and outsourcing of internal audit function increase the quality of earnings. However, board independence, board financial expertise, audit committee's chairman audit partner, audit committee meeting, and audit committee score reduce earnings quality. The hierarchical regression results show that audit committee size, independence, meetings, and audit committee score moderate the relationship between investment in the internal audit function and earnings quality. In addition, audit committee independence, financial expertise, meetings, and audit committee score moderate the relationship between sourcing arrangements of the internal audit function and earnings quality. The results of this study have implications to investors, regulators, and market participants. Policy makers might use the findings regarding earnings quality to recognize the important roles played by both the internal audit and audit committee in enhancing the earnings quality in Malaysian companies.

Keywords: internal monitoring mechanisms, board of directors, audit committee, internal audit function, earnings quality

ABSTRAK

Kualiti pendapatan mencerminkan integriti dan kualiti laporan kewangan yang mengurangkan maklumat tak simetri dan agensi konflik dalam kalangan pengurusan, pemilik, dan pemegang saham majoriti dan minoriti. Isu kualiti pendapatan telah menjadi satu kebimbangan, terutama yang berkaitan dengan tadbir urus korporat sebagai mekanisme pemantauan dalaman bagi memastikan laporan kewangan berkualiti. Objektif kajian ini adalah untuk meneliti hubungan antara mekanisme pemantauan dalaman, iaitu lembaga pengarah, jawatankuasa audit, fungsi audit dalaman, dan kualiti pendapatan berdasarkan teori agensi dan teori pergantungan sumber. Tambahan pula, kajian ini meneliti kesan penyederhana jawatankuasa audit terhadap fungsi audit dan kualiti pendapatan. Sampel kajian ini adalah 2,036 firma di Pasaran Utama Bursa Malaysia bagi tempoh 2009 hingga 2012. Dua model *discretionary accruals* digunakan untuk mengukur kualiti pendapatan. Kajian ini mendedahkan bahawa saiz lembaga, kepakaran kewangan jawatankuasa audit, pelaburan dalam fungsi audit dalaman, dan penyumberan luar fungsi audit dalaman meningkatkan kualiti pendapatan. Walau bagaimanapun, kebebasan lembaga, kepakaran kewangan lembaga, rakan kongsi audit pengerusi jawatankuasa audit, mesyuarat jawatankuasa audit, dan skor jawatankuasa audit mengurangkan kualiti pendapatan. Hasil regresi hierarki menunjukkan bahawa saiz jawatankuasa audit, kebebasan jawatankuasa audit, mesyuarat jawatankuasa audit, dan skor jawatankuasa audit menyederhana hubungan antara pelaburan dalam fungsi audit dan kualiti pendapatan. Di samping itu, kebebasan jawatankuasa audit, kepakaran kewangan jawatankuasa audit, mesyuarat jawatankuasa audit, dan skor jawatankuasa audit menyederhana hubungan antara penyumberan luar fungsi audit dalaman dan kualiti pendapatan. Hasil kajian ini mempunyai implikasi kepada pelabur, pengawal selia, dan peserta pasaran. Pembuat dasar mungkin boleh menggunakan penemuan mengenai kualiti pendapatan untuk mengiktiraf peranan penting yang dimainkan oleh kedua-dua jawatankuasa audit dan audit dalaman dalam meningkatkan kualiti pendapatan syarikat Malaysia.

Kata kunci: mekanisme pemantauan dalaman, lembaga pengarah, jawatankuasa audit, fungsi audit dalaman, kualiti pendapatan

ACKNOWLEDGEMENTS

After praising Allah for the strength and endurance provided to me to complete this thesis, my untold gratefulness to my parents who bless me all the time and have worked for my best interests ever since I was born.

Firstly and foremost, I would like to render my utmost appreciation and gratitude to my supervisor, Assoc. Prof. Dr. Hasnah Kamardin, for her earnest guidance and advice in the preparation of my thesis as well as her tolerance and persistence in imparting her knowledge to her students. Without her understanding, consideration and untiring advice, this thesis would not have been completed successfully.

I wish to express my deep gratitude to my proposal defence reviewers: Dr. Rohaida Abdul Latif and Dr. Mohd'Atef Md Yusof for their valuable comments and recommendations. Also, I am very thankful to the examiners, Assoc. Prof. Dr. Engku Ismail Engku Ali (Chairman for Viva), Assoc. Prof. Dr. Mohd Hassan Che Haat (external examiner) and Dr. Mohd'Atef Md Yusof (internal examiner) for their expertise which has greatly improved this thesis.

I would like also to express my grateful appreciation to my UUM lecturers who have imparted valuable knowledge during the time of my Master's programme at UUM. I acknowledge and appreciate the assistance of the UUM academic and administrative staff in completing this journey.

Special thanks are due to my dear friends, Dr. Hamdan Amer Ali Al-Jaifi, Dr. Abood Mohammad Salmeen Al-Ebel, Dr. Adel Ali Abdo Al-Qadasi for their support and timely advice. I would like also to express my grateful appreciation and many thanks

to my friend Mohammed Ahmed Al-Sabahi for his constant support during my PhD study.

My heartfelt and sincere appreciation and thanks are also extended to my parents who I missed so much and their unforgettable DOA'A, financial support, spirit and encouragement. I must also acknowledge and thank the continuous support that I received from my wife, brothers, sisters, my entire family, relatives and friends in completing this thesis.

Finally, my gratitude and thanks are also extended to my sponsor, the Ministry of Higher Education in Yemen for the financial support.

My heartfelt appreciation to all those involved in making this thesis a reality and those who have contributed towards this profound learning experience, thank you so much.

TABLE OF CONTENTS

CHAPTER THREE: RESEARCH METHODOLOGY

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

CHAPTER FIVE: SUMMARY AND CONCLUSIONS

LIST OF TABELS

LIST OF FIGURES

LIST OF ABBREVIATIONS

AASB	Australia Accounting Standards Board
ASB	Accounting Standards Board
AC	Audit Committee
ACSORE	Score for Effectiveness Of Audit Committee
ACCHPAR	Audit Committees Chairman Audit Partner
ACEXPERT	Audit Committee Financial Expertise
ACIND	Audit Committee Independence
ACMEET	Audit Committee Meetings
ACSIZE	Audit Committee Size
BIG4	Audit Quality
BDIND	Board Independence
BDEXPERT	Board Financial Expertise
BDSCORE	Score for Effectiveness of Board Of Directors
BDMEET	Board Meetings
BDSIZE	Board Size
BOD	Board of Directors
DA	Discretionary Accruals
EM	Earnings Management
EQ	Earnings Quality
FASB	Financial Accounting Standards Board
FCCG	Finance Committee on Corporate Governance
FRS	Financial Reporting Standards
FSIZE	Firm Size
GDP	Gross Domestic Product
IAF	Internal Audit Function
IAFINV	Investment In Internal Audit Function
IAFSOU	Internal Audit Function Sourcing Arrangement
IAS	International Accounting Standards
IIA	Institute Of Internal Auditors
IASB	International Accounting Standards Board
LEV	Leverage
LOSS	Net Loss
MASB	Malaysian Accounting Standards Board
MCCG	Malaysia Code on Corporate Governance
MIA	Malaysian Institute of Accountants
MICPA	Malaysian Institute of Certified Public Accountants
OWCO	Ownership Concentration
ROA	Return on Assets
SGROWTH	Sales Growth

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

In the early 2000s, the downturn in equity markets in most of the nations around the world has been linked to the lack of financial accounting information transparency and quality. A situation that has caused worry for investors over inadequate informative accounting, specifically with respect to earnings reported. The corporate scandals involving big companies, such as Enron, WorldCom and Parmalat, among others, and the collapse of financial institutions, such as Lehman Brothers, Fortis, and AIG, with the economic recession, have led to considerable loss in investors' confidence in corporate disclosure authenticity, which causes doubt regarding corporate reporting (Tasios & Bekiaris, 2012). The world financial crisis also emphasised and drew attention to the importance of transparency for promoting fair competition, investment, and improving confidence on the public and corporate sectors accountability (Nam & Nam, 2004).

The issue underlying the financial reporting quality is not only a main concern to the financial users but also to society as a whole, as it impacts on economic decisions (Tasios & Bekiaris, 2012). Since, outside financial reporting users are unable to directly view the actual firm earnings, they are highly dependent on reported accounting numbers (Norwani, Mohamad & Chek, 2011). The quality of financial reporting in the company's annual report provides useful information to help users in making well-informed decisions about the company based on the information in the annual report, which should reflect the real financial and commercial position of the company.

High earnings quality (EQ), and financial reporting transparency and auditing are important to the investors and other stakeholders. Concerns about the earnings management relationship with the recent high-profile scandals in accounting have caused the majority of the investing community to demand EQ, which is highly effective for the purpose of enhancing the financial statements quality (Bedard & Johnstone, 2004). The quality of earnings aspects, such as accruals quality, stock price synchronicity, persistence, conservatism, smoothness, predictability, and value relevance have received much attention as important indicators related to EQ (Ismail & Elbolok, 2011). In particular, one of the interesting topics for debate among academics as well as the investors has been accruals quality. The debate also concerns users, stockholders and other regulators, analysts, and the institutions of financial analysis (Gaio, 2010; Mohammady, 2010).

Earnings quality (EQ) is the opposite of earnings management (EM), that is, more EM results in less EQ (Ewert & Wagenhofer, 2013). EM refers to account manipulation that is due to the management's desire to mislead investors and to gain some benefits; for example, to reduce political costs, to avoid variation of debt to equity ratio, and to increase the manager's wealth, all of which affect the financial reporting quality (Radzi, Islam, & Ibrahim, 2011; Sun, 2012). According to Ronen and Yaari (2008), there are three types of EM. First, is white EM, which is used by managers from the flexibility in the choice of alternative accounting treatments to signal the managers' private information to provide some information about future cash flows. Second, is grey EM, which is used by managers to maximize their wealth by choosing economically efficient accounting treatment. Third, is black EM, which is used by managers to mislead financial reporting users using accruals management.

Basically, the accruals method (the third type) is widely used to manage earnings (Ronen & Yaari, 2008). Accruals are the difference between earnings before extraordinary items and operating cash flows.

Managers use the EM to alter financial reports in order to get the target analysis needed (Radzi *et al*., 2011). Prior empirical studies (Ali Shah, Butt & Hassan, 2009; Bekiris & Doukakis, 2011; Chen, Elder & Hsieh, 2007; Liu & Lu, 2007; Valipour, Talebnia & Javanmard, 2011; Yunos *et al*., 2010) suggested that EM takes place in order to compensate management, meet the debt agreements and avoid regulatory intervention (political costs). Furthermore, the effect of EM is not only confined to the current accounting period, but extends to the income statement and balance sheet, and profits accumulated since the company began operating.

The failures of publicly known businesses have shed light on corporate governance reforms on a global scale (Kim, 2008). Special attention has been given to key players in the corporate governance, such as the efficiency of the board of directors, audit committee, and auditing. Thus, corporate governance codes around the world were developed and revised. These include the Sarbanes Oxley Act (2002) in the United States, the Cadbury Report (1992) in the United Kingdom, the Dey Report (1995) in Canada, the Vienot Report (1995) in France, Principles and Guidelines on Corporate Governance (2004) in New Zealand, the Olivencia Report (1998) in Spain, the King's Report (1994) in South Africa, and the Cromme Code (2002) in Germany. The objective of these regulations and codes were to improve a firm's corporate governance effectiveness (Bhagat & Bolton, 2009; Norwani *et al*., 2011). These codes are expected to be able to restore the confidence in market transparency and

protect the investors by overseeing the financial reporting process and assuring transparency of the financial reporting and corporate accountability (Bhagat & Bolton, 2008).

1.2 Corporate Governance and Financial Reporting Quality in Malaysia

Every organization regardless of size, public or private oriented, profit or non-profit type of operation, has the objective to satisfy customers, investors, creditors, suppliers, regulators and the public at large that they are operating responsibly towards more accurate financial information (Abdullah, 1999). This can be achieved through gaining confidence from all parties to invest in the essential aspects of businesses. Having good corporate governance practices and transparency of financial reporting would enhance the confidence. The financial crisis in Asia in 1997/1998 resulted in investors' loss of confidence due to the absence of corporate governance effectiveness and the lack of transparency in financial reporting (Leng, 2004; Hashim, 2009).

The advent of the Asian financial crisis brought about the realization that the crisis was partially due to the level of governance, which was weak, and the ineffective standards of governance (Hashim, 2009; Nam & Nam, 2004). This crisis led the Malaysian government to improve the system of corporate governance. The ownership structure in Malaysian listed companies may also have contributed to this crisis (Nam & Nam, 2004). According to Thillainathan (1999), shareholdings in Malaysian corporations are often concentrated via cross-holdings and a pyramid structure where the controlling shareholders can be individuals or families having over 50% ownership, which constitutes a scenario that could cause deficiencies in

corporate governance. Claessens, Djankov, and Lang (2000) found that Malaysia is third out of nine East Asian Countries in terms of concentration of ownership control. Claessens *et al*. (2000) found that the family control in Malaysia corporations rose from 57.7% at the end of fiscal year 1996 to 67.2% at the end of 1998.

Hashim (2009) mentioned that East Asian countries, including Malaysia, have lost the confidence of investors in the capital market. She contended that the problem of financial reporting quality requires in-depth examination, as there have been high profile cases involving well-known Malaysian companies, such as Malaysian Airlines Systems, Tat Sang, FA Peninsular, Time dotcom, and Technology Resources Industries. Therefore, she stated that there is an urge for more studies to be conducted on the country's corporate governance in order to examine the association of corporate governance with the EQ that were largely unexplored in the Malaysian context. According to Klein (2002), effective corporate governance is required to reduce the opportunistic behaviour of managers to manage earnings and would lead to the improvement in financial reporting quality. In the case of Malaysia, a series of revised corporate governance codes was introduced to improve the corporate governance practices.

The Malaysian corporate governance code is an adapted version of the UK code, which acknowledges the significance of the effective governance principles for business welfare and accountability. It also follows the Anglo-American approach where the model is often known as the shareholder model or market model, displaying a unitary system in which the board of directors occupy the position of the

governing body. This system considers individual shareholders as incapable of influencing the firm's direction (Keasey & Wright, 1993) and thus they require independent external directors for the monitoring of management with the inclusion of the CEO. Such directors should pass the general test of independence as stipulated in Para 1.01 of the Bursa Malaysia Listing Requirements. The requirements state that directors should not be dependent on management and should stay clear from any associations or business that could jeopardize them exercising independent judgment or their actions towards the interests of the firm. It also stipulates their independence from any personal relations, relations with the executive directors or largest shareholders of the firm and their professional advisers, directors' nominees, and officers in the last two years or relations with other parties entering into contract with the firm (Yunos, Smith & Ismail, 2010).

The Malaysian government adopted certain measures enhanced by the regulatory bodies and accountancy profession to alleviate the occurrence of fraud and fraudulent financial reporting, which, in March 2000, resulted in the Malaysian Code on Corporate Governance (MCCG). This code focused on the board of directors, accountability, shareholders, and remuneration of the directors. Initially, the code was voluntary before Bursa Malaysia made it mandatory in 2001 for listed companies and a revision of the Code (known as MCCG 2007 Code) which was introduced in 2007 to fortify its roles. It mandated that the board should establish other corporate governance mechanisms to enhance more internal monitoring control. The function of an internal audit as an internal monitoring mechanism is to directly report to the audit committee. The Corporate Governance Code 2012 (known as MCCG 2012) fortifies the composition and structure of the board through which

the role of the directors recognized as being that of active and responsible fiduciaries. Their responsibilities to the company involve that of effective stewards and guardians. They are not only to set the strategic direction and oversee business conduct, but also to make sure that the company's conducted in compliance with the laws and ethical values. They should also ensure that the governance structure is effective in order to give room for the management of appropriate risks and internal controls.

Based on the above, the board of directors' effectiveness is an internal monitoring mechanism because it is responsible to the stakeholders and answerable for evaluating the adequacy and honesty of the financial statements quality. The audit committee is also one of the important monitoring pillars as it supports the board of directors' function to supervise the process of financial reporting while the function of internal audit supports the audit committee through the reports of the internal auditors.

1.3 Internal Monitoring Mechanisms and Earnings Quality

According to the agency theory, the internal monitoring mechanisms, such as the board of directors (BOD), audit committee (AC) and internal audit function (IAF), are considered as important monitoring mechanisms to safeguard the interests of the shareholders (Beretta, 2010). For example, through the board of directors' monitoring, the effective role of the AC and IAF, the improvement of earnings quality (EQ) the financial reporting quality are achieved. Several studies widely examined the relationship between EQ and BOD and AC characteristics (Abdul Latiff & Taib, 2011; Al-Dhamari & Ismail, 2012; Baxter & Cotter, 2009; Ismail,

Adibah, Dunstan & Van Zijl, 2010; Klein, 2002; Xie, Davidson & DaDalt, 2003), while others focused on the IAF (Adiguzel, 2013; Al-Shetwi, Ramadili, Chowdury & Sori, 2011; Garcia, Barbadillo, & Perez, 2010; Johl, Johl, Subramaniam & Cooper, 2013; Mansor, Che-Ahmad, Ahmad-Zaluki & Osman, 2013; Prawitt, Smith & Wood, 2009). Furthermore, other studies examined EQ with the BOD and AC effectiveness (Hunton, Hoitash & Thibodeau, 2011; Ward, Brown & Rodriguez, 2009).

The characteristics of the BOD and AC provide information about the ability of the BOD and AC to reduce particular forms of agency conflict (Abbott, Parker & Peters, 2004; Abbott, Parker, Peters & Raghunandan, 2003; Alzoubi, 2012; Carcello, Hermanson, Neal & Riley, 2002; Chen & Zhou, 2007; Krishnan & Lee, 2009). Previous studies on ACs have suggested that monitoring roles could be influenced by their composition, size, financial expertise and frequency of meetings (DeZoort, Hermanson, Archambeault & Reed, 2002; Garcia, Barbabillo & Perez, 2010; Salleh & Haat, 2014; Sharma & Kuang, 2014; Walker, 2004; Xie *et al*., 2003; Yusof, 2010). Furthermore, according to Fama and Jensen (1983), the highest-level of control mechanism is the BOD since they have the final power to compensate the top management's decision. Xie *et al*. (2003) proved that many features of a BOD could affect their effectiveness in performing their supervisory role. The features of the board include size, independent, financial expertise and meetings.

The revised Malaysia Code on Corporate Governance (MCCG 2007) also focused on the IAF to enhance the internal monitoring in order to increase the financial reporting quality. The auditors' role in an organization has been extended from their past classic role of control checker to include the further strategic role of corporate

governance partner. Thus, there are four main parties in enhancing corporate governance (board of directors, audit committee, internal auditors and external auditors). If any party fails, it could lead to the failure of all parties (Hashim & Devi, 2007).

According to Kamardin and Haron (2011), the Companies Act 1965 and the Malaysian Corporate Governance Code (Finance Committee on Corporate Governance, 2001) both stressed the presence of effective monitoring mechanisms in public companies. They also addressed the implications of concentrated ownership in Malaysian companies in light of the significant call for effective monitoring mechanisms to prevent the expropriation of firm assets by the majority of shareholders while forsaking the rights of minority shareholders. There is evidence from previous studies, such as Hunton *et al*. (2011), and Ika and Ghazali (2012), who found that corporate governance strength (BOD and AC) has a positive relationship with EQ. Also a number of studies (Al-Shetwi, *et al*., 2011; Alzoubi, 2012; Cohen, Krishnamoorthy & Wright, 2004; Krishnamoorthy, Wright & Cohen, 2002) have examined separately whether internal monitoring mechanisms (the AC, BOD, and IAF) have a relationship with the financial reporting quality.

Therefore, governments introduced corporate governance reform. In 2000, the Malaysia Code on Corporate Governance (Code 2000) is issued as part of Bursa[1] Malaysia listing rules, and the Minority Shareholder Watchdog Group (MSWG) is established to enhance institutional investors activism. Ying (2014) mentioned that in recent years the occurrence of shareholder activism in Malaysia has been gradually

[1] Formerly known as Kuala Lumpur Stock Exchange.

increasing. Then, The MCCG 2000 code was subsequently revised in 2007. In 2011, Securities Commission of Malaysia launched the Corporate Governance Blueprint 2011 as a five-year action plan to raise corporate governance standards. One product of this action plan was the Malaysian Code on Corporate Governance 2012 (the '2012 Code'), which superseded the 2007 Code.

Institutional investors have strong fiduciary responsibilities (Chung & Zahang, 2011). Howover, Due to the fiduciary responsibilities and the monitoring and, instituatioanl investors would be attracted to firms with strong corproare governance. In other words, the fiduciary responsibilities facilitate the predisposition of institutional investors toward firms that have strong governance mechanisms (Hawley & Williams, 2000). It has been found that institutional investors have more incentives to invest in shares with good disclosure ranking in order to minimize monitoring costs (Bushee & Noe, 2000). Instituational investors prefer firms with strong corporate governance as these firms require less monitoring costs. Further, exit costs is also a concern for instituatial investors, when trading costs are high, they pay more attention to monitor their investment more than the individual investors regardless of the free-rider problem (Chung & Zahang, 2011).

1.4 Problem Statement

Since the financial crisis in 1997, concerns about earnings quality (EQ) as a measurement of financial reporting quality have increased as evidenced by the new regulatory and institutional reforms. Such concerns led to the aim to ensure that companies in Malaysia improve their financial reporting, which, consequently, enhances the investors' confidence (Hashim, 2009). Studies in Malaysia have shown high agency problems (Kallunki, Sahlstrom & Zerni, 2007), high earnings

management (EM) practices (Abdul Rahman & Ali, 2006, Ardekani, Younesi & Hashemijoo, 2012) and high insider trading (Ali, Ahmad & Anusakumar, 2011). In Malaysia, another study, by Saleh, Iskandar and Rahmat (2005), noted that in any firm, poor corporate governance could cause EM to be higher. The MCCG has emphasised the important role of the board of directors (BOD), audit committee (AC) and internal audit function (IAF) to enhance financial reporting quality. Therefore, it is important to examine the influence of internal corporate governance monitoring mechanisms on the level of EQ in Malaysian listed firms.

Fan and Wong (2002) found that the accounting earnings informativeness is lower for East Asian firms including Malaysia, which have higher controlling shareholders. This ensures the importance of examining the impact of governance monitoring on the financial reporting quality in this environment. Moreover, there is no refuting the association of corporate governance with financial reporting. Thus, if corporate governance fails, it may cause financial reporting to fail. Evidence of this has been provided in many cases in Malaysia and other countries. In Malaysia, there are some example cases of financial reporting fraud, such as MAS, TRI, Perwaja Steel, Megan Media Holdings Bhd (Megan Media), Oilcorp Bhd, Polymate Holdings Bhd, and Transmile Group Bhd (Transmile) (Radzi *et al*., 2011).

In Malaysia, fraud and criminal breach of trust is on the rise. In a survey carried out in 2007, 48% of the companies in Malaysia were victims of economic crime, and with regards to fraud, 62% of listed companies were affected (Sadique, Clark, Alias & Roudaki, 2010). Based on another related study by KPMG Malaysia's Fraud Survey Report 2009, nearly 50% of the 175 companies surveyed reported at least a

single incident of fraud (KPMG Fraud Survey Report 2009). The survey was conducted from 2006-2008 and the companies reported total losses of RM63.9 million. This would influence the capital market and the nation's market stability. A total of 95 companies were eventually delisted by Bursa Malaysia for financial fraud in the period 1st January 2003 to 15th July 2010, indicating that the issue of fraud and economic crime has huge significance. Hence, one of the techniques to counter financial scandals is to improve the reporting of EQ, and through the improvement in corporate governance quality and auditing services quality, high quality financial reports will be the outcome.

During the adoption and reinforcement of corporate governance practices, the East Asian countries (including Malaysia) have experienced certain problems as the economies of these countries have particular characteristics. For example, the level of ownership is highly concentrated, the government intervenes excessively, legal systems and enforcement are weak, low quality of information, and legal structures and institutions are not well developed, all of which pose particular and challenging difficulties for the enhancement of effective governance practices (Hashim, 2009; Nam & Nam, 2004).

Many studies have been conducted in an attempt to identify the impact of corporate governance mechanisms on financial reporting quality (Abdullah, 1999; Al-Shetwi *et al*., 2011; Fan & Wong, 2002; Gaio, 2010; Hashim & Devi, 2007; Lin, Li & Yang, 2006; Radzi *et al*., 2011; Zhou, 2008). However, the need and benefits of such corporate governance regulations in these environments have been the subject of considerable debate, as the ability of companies to abide by the principles of

corporate governance and the nature of its framework in order to help better practices, translate to high quality of financial reporting.

Notwithstanding, there has been a lack of studies that consider internal corporate governance monitoring with EQ and the evaluation of the corporate governance code and framework in Malaysia. In particular, the IAF as an internal corporate governance mechanism. Chen, Li, and Shapiro (2011) stated that the IAF could be significant to limit shareholders from their misappropriate control and protect the minority shareholders' interests in emerging countries. Therefore, the IAF is considered in this study to examine the influence of the IAF on EQ.

In terms of the empirical evidence in Malaysia, some studies investigated the association of corporate governance mechanisms with EQ, such as Saleh *et al*. (2005), and Saleh, Iskandar and Rahmat, (2007) who examined the effectiveness of board and AC characteristics on discretionary accruals (DA). Another study, by Abdul Rahman and Ali (2006), identified the extent of the monitoring role of the BOD and AC effectiveness on abnormal working capital. Ismail *et al*. (2010) also examined the board and AC and considered the 2001 Malaysian Code on Corporate Governance in their study by using DA. A study by Hashim and Devi (2007) investigated the association of board independence with the ownership structure and accrual quality for 2004. Radzi *et al*. (2011) investigated the relationship between internal audit quality (AC and IAF establishment) with DA for 2009 and 2010. Mohamad, Rashid and Shawtari (2012) examined the association between the characteristics of the BOD and the AC (size, independence, meeting and financial expertise) and DA before 2003 and after the transformation initiative of the

Government Linked Companies in 2006. Johl *et al*. (2013) examined the association between the IAF quality and EQ. Salleh and Haat (2014) studied the association between AC characteristics and DA.

Previous studies in Malaysia focus on modified Jones model to measure DA, where the study in Korea by Yoon et al. (2006), and study in Bangladesh by Aminul Islam et al. (2011) and another study in India by Patro and Pattanayak (2014) found that the Yoon et al. (2006) has more explanation power than modified Jones model to detect DA in Asian countries. Thus this study applied Yoon et al. (2006) model to measure DA in Malaysia. Furthermore, previous studies have used corporate governance monitoring mechanisms separately in relation to EQ. Thus, the notion that the effectiveness of one mechanism relies on the other mechanisms has been neglected. In their argument, Agrawal and Knoeber (1996), and O'Sullivan, Percy and Stewart (2008) noted that such findings on the influence of one mechanism could mislead in such a way as to indicate that the influence of some individual mechanisms on the performance of firm fade away in the combined model. In other words, examining all the mechanisms of corporate governance will provide a stronger measure of their influence rather than investigating them one by one. Therefore, the current study examines the internal monitoring mechanisms jointly (BOD, AC, and IAF) as well as the characteristics of these mechanisms separately and as scores to measure BOD and AC effectiveness on EQ.

In addition, there is a need for the BOD, AC and IAF to have a good relationship in order to be effective internal control mechanisms, and, ultimately, to improve the quality of financial statements (Barua, Rama & Sharma, 2010; Cooper, 1993; Garcia

et al., 2010; Nagy & Cenker, 2002). Strawser, O'Shaughnessy and Siegel (1995) also indicated that the Treadway Commission Report (1987) emphasized the robust and good relation of the AC working with internal auditors in discharging their duties because the internal auditors' reports are submitted to the AC and there is a regular meeting between the internal auditors and the AC. Therefore, this study is the first in terms of examining the individual and aggregate impact of the audit committees' effectiveness (as these characteristics complement each other) as moderators on the association between the IAF (investment in and sourcing arrangements of IAF) and EQ in Malaysia.

Additionally, this study focuses on the four main internal monitoring characteristics of the BOD, namely, board independence, size, frequency of meetings, and financial expertise, which effectively capture the BOD as a monitoring device. The components of these characteristics are also constructed as a score to reflect the BOD at the aggregate level. These characteristics work complementary to each other, for example, independent directors without financial expertise might not understand accounting numbers, also, in turn, less frequent meetings and unfit size of board makes it difficult to monitor and enhance the EQ. In other words, the absence or failure of one of the board monitoring characteristics leads to the weakness or failure of others, which, in turn, weakens and hinders the performance of the BOD as an internal monitoring device. Thus, the current study includes the four variables of BOD separately as independent variables, and a board score variable to represent the four variables bundled as another independent variable.

Gramling, Maletta, Schneider and Church (2004) revealed that there are four corporate governance cornerstones of which one is the IAF. Therefore, the IAF elements sourcing arrangements and investment are included in this study as independent variables. Cooper (1993) noted that the heads of departments of the internal audit should be directly accountable to the AC and should have frequent meetings with the AC. Accordingly, this study attempts to extend the EQ studies by investigating the association between independent AC members, size, their financial expertise, chairman former audit partner and their frequency of meetings with EQ. Accordingly, this study examines the characteristics of the AC (size, independence, financial expertise, chairman former audit partner and meeting) and AC score as independent variables on EQ.

Based on the literature, there is no empirical evidence about whether the chairman of the AC is or was an audit partner. In Malaysia, Yusof (2010) studied the relationship between former senior audit managers/partners on AC members and DA in 2007. He found a positive relationship between former audit partner and DA, and, therefore, the chairman position could be the most influential factor. Thus, this study aims to provide empirical evidence about the AC chairman being a former audit partner, which is an unexplored issue.

Sharma, Sharma & Ananthanarayanan (2011) found that the AC moderates the relationship between client importance and EQ, and that the relationship between client importance and EM is more noticeable when the AC effectiveness is weak. In addition, Alves (2013) reported that the AC moderates the relationship between external audit quality (Big4) and EM. Additionally, DeZoort and Salterio (2001)

indicated that better communication of the internal auditors with the audit committees might improve the corporate governance quality, which, in turn, could cause an increase in EQ. Additionally, according to the MCCG (2007), the AC is responsible for nominating internal auditors. They also have regular meetings with the head of the IAF and the internal auditors' reports are submitted to them. Thus, the AC might play the role of coordinator between the IAF and the BOD as well as with other parties related to the firm. Based on the responsibilities of the AC, the study examines the moderator effect of the AC between the IAF and EQ.

1.5 Research Questions

This study conducts an investigation to answer the questions related to identifying the quality of reported earnings of Malaysian firms and the relationship with internal governance monitoring mechanisms, and whether the relationship between earnings quality and internal audit function, as important mechanisms, is affected by the audit committee effectiveness. Specifically, this study tries to answer the following questions:

1. Does board of directors' effectiveness affect earnings quality?
2. Does internal audit function affect earnings quality?
3. Does audit committee effectiveness affect earnings quality?
4. Does audit committee effectiveness moderate the relationship between internal audit function and earnings quality?

1.6 Research Objectives

This study contributes to the financial reporting quality literature by investigating the association between the internal monitoring mechanisms, namely, board of directors,

audit committee, and internal audit function, and earnings quality. In addition, it examines the effectiveness of audit committee characteristics, namely, size, independence, financial expertise, chairman former audit partner, frequency of meetings and the sum of these characteristics (score) as moderators on the association between the internal audit function and earnings quality. This study explores the present situation of this phenomenon as an attempt to contribute to the development of earnings quality in financial reporting within Malaysian companies, which are listed in the Main Market of Bursa Malaysia. Therefore, the research objectives are:

1. To examine the relationship between board of directors' effectiveness and earnings quality.
2. To examine the relationship between internal audit function and earnings quality.
3. To examine the relationship between audit committee effectiveness and earnings quality.
4. To examine the moderating effects of the audit committee effectiveness on the relationship between the internal audit function and earnings quality.

1.7 Significance of the Study

1.7.1 Theoretical Significance

Understanding the issue related to earnings quality (EQ) is essential to academics as well as to practitioners and regulators. The revelation of the misleading audited accounts of several big companies in the US has increased public concern about the integrity of the financial reporting processes of firms (Abdullah & Nasir, 2004). Prior studies in Asian countries argued that, in general, corporate governance is not

efficient due to the power of the controlling shareholders (Abdul Rahman & Ali 2006; Abdullah & Nasir 2004; Park & Shin 2004). Other studies also provided somewhat mixed results regarding examining the corporate governance mechanisms in reducing the agency conflict on EQ. The reason behind the inconsistent results of previous studies might be that corporate governance mechanisms have been examined in isolation rather than jointly. In other words, they ignore the idea that corporate governance mechanisms work complementariy to each other. Companies that have high effectiveness of the board of directors (BOD), audit committee (AC) and internal audit function (IAF) will have better financial reporting quality than companies that do not. The reason for this is that the management of those companies work under intensive monitoring mechanisms.

In the Malaysian context, only a few studies have examined the effect of corporate governance on EQ, such as Abdullah (1999), Hashim and Devi (2007), Ismail *et al*. (2010), Johl *et al*. (2013), and Saleh *et al*. (2005) and (2007). To the researcher's knowledge, no study with Malaysian samples has directly tested jointly the effectiveness of BOD, AC and IAF (investment in and sourcing arrangements) on EQ. Therefore, this study fills this gap and contributes to the literature by examining the three internal monitoring mechanisms (effectiveness of BOD, effectiveness of AC and IAF) on EQ.

Another contribution made by this study is extending the work of other studies that examined the IAF (Garcia, Barbadillo & Perez, 2012; Johl *et al*., 2013; Mansor *et al*., 2013; Prawitt *et al*., 2009; Radzi *et al*., 2010), as the IAF is an important mechanism of a firm's corporate governance and control environment, and hence, affects control

risks (Wan-Hussin & Bamahroes, 2013). In addition, prior studies have documented the significant influence of the IAF's sourcing on the assessed quality of the internal auditor and the external audit function's reliance, and the planned external audit effort (Coram, Ferguson & Moroney, 2008; Desai, Gerard & Tripathy, 2011; Glover, *et al*., 2008; Munro & Stewart, 2010). Therefore, the effect of investment in and the sourcing arrangement of the IAF on EQ are examined in this study.

In addition, the present study also contributes to the body of knowledge by including the chairman former audit partner of AC as a new characteristic of the AC. Yusof (2010) studied the relationship between former senior audit managers/partners on the AC members and DA in 2007 in Malaysia. However, the chairman's position might be an influencing factor and remains an unexplored issue. Therefore, this study provides empirical evidence about AC chairman former audit partner.

In addition, this study extends the literature by examining the extended modified Jones model of Yoon, Miller and Jiraporn (2006), as the second measurement of discretionary accruals (DA), which has not been examined before with a Malaysian sample, as well as the extended modified Jones model of Kasznik (1999) as the first measurement to estimate DA as a dependent variable. Yoon *et al*. (2006) and Aminul Islam, Ali and Ahmad (2011) suggested that the extended modified Jones model by Yoon *et al*. (2006) is more robust than the modified Jones model for Asian countries.

Another contribution made by this study is examining the moderating effect of the AC (size, independence, financial expertise, chairman former audit partner and meeting) on the relationship between the IAF (investment in and sourcing

arrangements) and EQ. Furthermore, the study also examines the AC score as a moderator on the relationship between the IAF (investment in and sourcing arrangements) and EQ. Thus far, these moderators have not been examined yet. Hence, the results of this study fill the gap in the corporate governance literature and provide evidence about an emerging economy, namely, Malaysia. Thus, the results of this study are significant in the sense that it fortifies the views of the importance of the agency theory and resource dependence theory in analysing the practices of corporate governance and financial reporting in the Malaysian business environment.

1.7.2 Practical Significance

This study is expected to help several concerned parties to understand the earnings quality (EQ) of Malaysian firms. It contributes to the field of accounting research of EQ in a different environment in terms of regulatory and legislative institutions compared to environments that have already been studied. With regards to regulators of the Malaysian market, particularly the Malaysian Institute of Certified Public Accountants (MICPA), Malaysian Institute of Accounting (MIA), or the Institute of Internal Auditors Malaysia (IIAM), as well as to Bursa Malaysia, Securities Commission and Audit Oversight Board (AOB) this study may help them to reconsider and review the accounting standards across different sectors and to develop more effective quality of financial reporting for Malaysian listed companies to increase EQ and the credibility of financial reports. In other words, the results of this study assist accounting standard setters and regulatory bodies to know the extent of the financial reporting quality based on EQ practiced by Malaysian companies, and the degree of change in the financial reporting quality with the passage of time.

Financial analysts may find some analytical aspects in this study that may provide them with a better understanding of accounting figures and empower their investment decisions. The results of this study provide an opportunity for financial analysis to measure the influence of the internal audit function (IAF) on EQ, as, in Malaysia, the IAF plays an increasingly important role in the process of financial reporting as well as in the corporate governance landscape. With effect from 2009, all listed companies in Malaysia have to establish an IAF (MCCG 2007). This study capitalizes on the unique data on investment in the IAF that is publicly available for Malaysian listed companies, which gives the financial analysts the opportunity to measure the quality of the IAF practises by the amount of investment in the IAF (cost) and its impact on EQ. The Listing Requirements of Bursa Malaysia also require the IAF to be disclosed for the financial year irrespective of whether it is out-sourced or it is done in-house (MCCG 2007). Another party that might gain benefits from the results of this study is the investors, as EQ enhances investors' confidence. In other words, the results of this study are useful to investors by providing them with empirical evidence about which monitoring mechanisms are related to financial reporting quality.

1.8 Research Motivation and Scope of the Study

The aim of this study is to examine the phenomenon of financial reporting quality in light of the issue of earnings quality (EQ) in Malaysian non-financial companies listed on the Main Market of Bursa Malaysia. The most important advantage of using the sample of all listed companies on the Main Market is to increase the generalizability of the results. Financial related companies are excluded; this is because these companies have unique characteristics, different compliance and

regulatory environment and fall under the Banking and Financial Institutions Act of 1989 (Yatim, Kent & Clarkson, 2006; Yunos *et al*., 2010).

In addition, this study uses the Bursa Malaysia website for the period of study from 2009-2012 (four years). Reasons can be adduced for this choice. In the first instance, the current study employs Bursa Malaysia's Corporate Governance Guide (2009), which has been effective since 2009, to serve as a guide to the variables involved in corporate governance. In addition, the year 2009 is selected since it is the first full year that stipulated that listed firms disclose the amount of investment in the internal audit function (IAF) which mandatory from revised code of corporate governance in 2007 and the Bursa Malaysia Corporate Governance Guide in 2009 mandated all listed firms to start to disclose about the cost of IAF and the sourcing arrangements of IAF. Secondly, the current study is constrained to cover four years in order to make the task viable and where the discretionary accruals (DA) are considered as a measurement of EQ.

This study also aims to investigate the important aspects of corporate governance, namely, BOD' effectiveness (size, independent, financial expertise, meeting and board score) and IAF (cost of investment in IAF and sourcing arrangements of IAF) and the AC effectiveness (size, independent, financial expertise, chairman former audit partner, meeting and AC score), and AC effectiveness, as a moderating effect in the relationship between IAF and EQ.

Based on the literature, the previous studies examine the internal monitoring mechanisms (BOD, AC and IAF) separately and there is no empirical evidence about

whether the chairman of the AC is or was an audit partner. In Malaysia, Yusof (2010) studied the relationship between former senior audit managers/partners on AC members and DA in 2007. Therefore, the chairman position could be the most influential factor. Thus, gave motivation in this study to provide empirical evidence about the jointly effect of internal monitoring mechanisms in individual and aggregate level on the relationship with earnings quality. Additionally, there is no empirical evidence of the characteristic of AC chairman being a former audit partner, which is an unexplored issue.

1.9 Organization of Thesis

This thesis is organized into five chapters. Chapter One provides the background of the study, problem statement, research questions, research objectives, significance of the study, scope of the study, and organization of the study. Chapter Two provides a literature review on earnings quality followed by a discussion of the theory and related empirical studies on the effectiveness of the board of directors, audit committee, internal audit function. The theoretical framework, the hypotheses development, research method and design, data analysis technique, and the models used to test the hypotheses are presented in Chapter Three. Chapter Four presents the descriptive statistics of the variables, diagnostic test and regression results and additional empirical analysis. This thesis concludes in Chapter Five with a discussion and summary of the findings, study implications, limitations, recommendations for future research and the conclusion.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

The present chapter provides a review of prior studies concerning financial reporting quality. The chapter is divided into three parts. The first part discusses the financial reporting quality, its importance, financial reporting in Malaysia, earnings quality (EQ) and the theoretical framework of financial reporting. The second part provides the definition of corporate governance and an overview of the board of directors' effectiveness, the audit committee (AC) effectiveness and internal audit function (IAF) working together as internal governance monitoring mechanisms. Prior studies dedicated to the investigation of the association between effectiveness of board of directors (BOD) and AC, IAF and their relation to EQ are also touched upon. The final part concludes the chapter by providing the chapter summary.

2.2 Quality of Financial Reporting

The Accounting Standards Board (1999) defined the quality of financial reporting as "the extent to which the financial reporting provide fair and true information about underlying economic performance and the organisation's financial position". The Financial Accounting Standards Board (FASB) (2008, p.13) indicated that the objective of financial reporting is "to provide financial information concerning the reporting entity that is invaluable to the present and potential equity investors, lenders and other creditors who have to make decisions in their position as capital providers". These objectives focus on the financial information that is useful to stakeholders in decision-making, the information must be real and fair to reflect a firm's economic position and the users of financial reporting, such as investors,

lenders and other creditors, who make their decisions based on the reported information (Tasios & Bekiaris, 2012). Additionally, Miettinen (2008, p. 54) defined the quality of financial reporting as "how well a company's financial information reflects the true economic circumstances of the company".

Financial reporting quality can be described as transactions wherein financial report issuers provide information to users to enhance their financial decisions (Tasios & Bekiaris, 2012). In addition, the financial reports are considered to be a useful method of communicating financial information to the potential users. Due to the presence of information asymmetry and the agency conflicts between managers' interests and external users, auditors should audit financial reporting. This is an option available for monitoring arrangements that can enhance the financial reporting which consequently increase investors' confidence about the firm performance and traded securities that reflect the company image (Ismail *et al.,* 2010; Johl, Kaur & Cooper, 2015).

High information quality can decrease the agency cost issue through filling in the gap of information asymmetry that arises between shareholders and managers (Karamanou & Vafeas, 2005). However, no consensus has been reached as to what comprises the financial reporting quality; for example, the Blue Ribbon Commission (BRC) (1999) and Sarbanes-Oxley Act (SOX) mandate that auditors to discuss the financial reporting quality methods and acceptability. In terms of empirical research, Jonas and Blanchet (2000, p. 353) claimed that owing to the new requirements, audit committee members, auditors and management are trying their best to provide a definition of financial reporting quality. Issues often identified by prior studies (Al-

Shetwi *et al.*, 2011; Barth, Landsman & Lang, 2008; Garcia, Barbadillo & Perez, 2012; Jonas & Blanchet, 2000; Nichols & Wahlen, 2004; Owens-Jackson, Robinson & Shelton, 2009; Tasios & Bekiaris, 2012) the impact of corporate governance, earnings management, earnings quality, and fraud on the financial reporting quality.

2.3 The Importance of Financial Reporting

There are many potential users of financial reports, such as investors, government authorities, suppliers, creditors, financial analysts and other parties related to the company. Auditors, managers, boards of directors, and audit committees have a benefit in generating superior quality financial reports; for instance, to assist in decreasing the cost of capital by minimizing information asymmetry, high disclosure and high earnings quality (EQ) that would result in the attraction of possible investors (Aboody, Hughes & Liu, 2005). Additionally, regulators and standard setters can maximize the capital markets effectiveness by laying down rules that can contribute to ensuring financial reporting quality. The financial reporting quality issue is a top concern for all users as well as the entire society as it influences economic decisions, which, in turn, may have a serious impact upon the society as evidenced by the series of corporate failures (e.g. Enron, Parmalat) and collapses of financial institutions (e.g. Lehman Brothers, Fortis, AIG) and by the economic environment stemming from the economic downturn (Tasios & Bekiaris, 2012).

The international research (Ball, Robin & Wu 2003; Bushman & Smith, 2001; Gorgieva-Trajkovska & Kostadinovski, 2012; Lin, Jiang, Tang, & He, 2015; Sun 2005) in accounting generally concentrates on four factors of accounting effectiveness. First, authentic financial information offers accurate performance

measure and enhances corporate governance that leads to superior economic performance (Bushman & Smith, 2001). They stated that financial accounting information directly contributes to corporate control mechanisms created to make managers accountable and to direct resources toward feasible projects, steer clear of bad projects, and to stop managers from expropriating investors' wealth. In other words, the role of corporate governance in accounting is crucial in enhancing investment decisions.

Second, according to Sun (2005), in countries characterized with having high quality in accounting, earnings are closely linked to the economic activity. He found the relationship between accounting measure of returns and GDP growth to be higher in the developed countries like the UK and the US, and low in both France and Germany. Ball *et al.* (2003) contended that the findings indicate the need for the quality of financial reporting. Ball and Shivakumar (2005) extended this line of research by contending that market demand maximizes the financial reporting quality. They provided evidence that UK private firms acknowledge economic losses later compared to public firms, despite the fact that both adhered to accounting standards. They concluded that public firms' earnings are high quality owing to the high market demands rather than the reported earnings in the private sector.

Additionally, in some developing nations, political influence as well as the high concentration of family businesses limit the demand for high financial reporting quality, because the demand for quality financial reporting is driven by information asymmetry and agency problem between managers and stockholders (Claessens & Fan, 2003). Earnings reported from Malaysia, Hong Kong, Singapore, and Thailand

are not as timely compared to the earnings from the majority of developed nations (Simon, 2001).

In other words, the listed firms are required more internal monitoring role to ensure high quality of financial reporting which in terms minimizes information asymmetry and agency conflict between management and shareholders. In Malaysia a high ownership concentration by family and managerial ownership and the agency conflict found between minority and majority shareholders, thus the improvement of corporate governance regulations (MCCG 2000, revised MCCG 2007 and MCCG 2012) focus on the internal monitoring mechanisms to safe the interest of minority shareholders.

Third, research on international accounting examines the association between the quality of disclosure and the capital cost. Accounting information of high quality can decrease information asymmetry among managers, shareholders and investors, which enhances the decision-making, and, hence, minimizes the cost of financing (Gorgieva-Trajkovska & Kostadinovski, 2012).

Fourth, financial reporting systems that are of high quality are related to the liquidity of stock markets (Lin *et al.*, 2015). On the other hand, low information quality in financial reporting will mislead investors in investment decision-making. Accurate accounting information can lead to a reduction of the negative selection issue and increased liquidity in the capital markets (Gorgieva-Trajkovska & Kostadinovski, 2012; Sun, 2005). Along the same line of studies, Ball *et al.* (2003) provided

evidence that the incentives offered to the financial statement preparers have a key role in reporting superior quality financial information.

The quality of financial reporting is required for capital markets efficiency as individuals and groups conduct their resource allocations on the basis of financial information (Healy & Palepu, 2001). Hence, the regulators' aim is to discuss policies on issues linked to financial reporting to determine the future direction of governance policies for Malaysian firms, while the standard setters enact those rules and regulations that guarantee high quality of financial reporting. In turn, these high standards improve the investors' confidence by enabling economic transactions of a similar nature to be considered in the same way throughout the world.

Various countries around the world establish best practices as guidelines; for instance, the Cadbury Report (1992) in the UK, Sarbanes Oxley Act (2002) in the US, Dey Report (1995) in Canada, Vienot Report (1995) in France, Olivencia Report (1998) in Spain, King's Report (1994) in South Africa, Principles and Guidelines on Corporate Governance (2004) in New Zealand and the Cromme Code (2002) in Germany. The aims of these codes and regulations are to enhance firms' corporate governance environments, which are expected to improve the financial reporting quality (Bhagat & Bolton, 2008). Concerns about high-profile accounting scandals, which resulted in earnings management, have led to a call for more effective EQ as a means to improve the quality of financial statements leading to increasing the demand of high EQ, financial reporting transparency and auditing in the business world (Wang, 2006).

In fact, the quality of financial reporting is inherently difficult to measure (Dechow *et al.*, 2012). There are many factors that may affect financial reporting quality, including management incentives to obtain the analysis targets, accounting standards quality that are set to help the managers and auditors to prepare financial reporting, and also a country's institutional environment (e.g. legal/judicial system, investor protection, legal enforcement, capital market development, etc.) (Chen, Tang, Jiang & Lin 2010; Ball *et al.*, 2003).

2.4 Financial Reporting in Malaysia

Malaysia was ruled by the British for more than 80 years prior to its independence in 1957, which explains the influence of British accounting standards and reporting practices. Moreover, the introduction of the International Accounting Standards (IAS) in the 1970s greatly affected the formation of the Malaysian accounting standards. By 1977, the professional accounting bodies, namely, the Malaysian Association of Certified Public Accountants (MACPA) and the Malaysian Institute of Accountants (MIA) introduced IAS, the standards stipulated by the International Accounting Standards Committee (IASC). They were reviewed and modified to suit the local needs and the adoption of IAS in the country occurred 2 to 3 years following its introduction.

Moreover, the Malaysian Accounting Standards Board (MASB) was set up under a part of the Financial Reporting Act in 1997 as an authority with autonomous powers to develop and issue accounting and financial reporting standards in the country. It made significant progress, advancement and contribution in this context to the adoption and application of effective internationally acknowledged accounting

standards, which were implemented by the Financial Reporting Standards (FRS) 139 on 1st January 2010 and on 1st January 2012, thereby indicating the changeover from the Malaysian FRS to the International Financial Reporting Standards (IFRS). The first year reporting under the IFRS regime established this Standard's principles for the financial assets, financial liabilities, and contracts to buy/sell non-financial items' recognition and measurement. The Standard provided guidance on de-recognition, fair value measurement of financial assets and financial liabilities, assessment of impairment, determination of fair value and hedge accounting aspects.

Another source of Malaysian accounting practice is the Company Act in 1965, which provides the requirements of disclosure and mandates the financial statements to present accurate facts and reflects the British influence in Malaysian financial reporting. In 1970, the government of Malaysia amended the Companies Act 1965, which involves the Malaysian corporate governance legislative framework. This amendment impacts publicly listed companies as well as other types of company incorporated under the Companies Act 1965 (Hassan, Moyes, Mohd-Sanusi & Iskandar, 2010). The main theme behind the amendment was corporate governance, which included the duties and responsibilities of the BOD and their obligations for the transaction of disclosure. The amended Act also statutorily recognized the responsibilities and the autonomous authority of the BOD, and expanded the definition to cover individuals who have the authority to handle the firm's operations and financial management. The amendment called for major improvement and increased the level of transparency, financial reporting quality and accountability from the directors and officers of the firms (Abdul Rahman & Ali, 2006).

In Malaysia, the adoption of a corporate governance framework that is universally accepted principles and improves the confidence of foreign investors, and the new development and revision of the Malaysian corporate codes is expected to enhance the corporate governance and attract foreign capital investments in Malaysian firms (Hassan *et al.*, 2010). These new developments are also expected to enhance accountability, transparency and the quality of financial reporting among Malaysian firms, thereby leading to a free market and safe investment (Abdul Rahman & Ali, 2006).

Some previous studies in Malaysia related to the quality of financial reporting, such as Johari, Mohd Saleh, Jaffar and Sabri Hassan (2008) examined the effect of board independence, competency as well as ownership upon earnings management (EM), Fan and Wong (2002) examined the relations between the ownership structure and EM, and Yunos *et al.* (2010) studied the influence of ownership concentration on accounting conservatism.

With regard to earnings quality (EQ) studies in Malaysia, Al-Dhamari and Ismail (2012) studied the impact of the characteristics of the board of directors (BOD) and audit committee (AC) on EQ, and Hashim and Devi (2007) studied the association between internal governance mechanisms, namely, board independence, ownership structure and EQ. Sejati (2009) studied the association between the political connection of firms and financial reporting quality. Additionally, many studies in Malaysia examined the association among the BOD, AC and EM (discretionary accrual measurement) and found mixed results (Abdul Rahman & Ali, 2006; Abdullah & Nasir 2004; Buniamin, Johari, Rahman & Rauf, 2012; Ismail *et al.*,

2010; Mansor *et al.*, 2013; Mohamad *et al.*, 2012; Radzi *et al.*, 2010; Saleh *et al.*, 2005; Saleh *et al.*, 2007; Salleh & Haat, 2014; Yusof, 2010).[2]

2.5 Earnings Quality

Despite the considerable research on earnings quality (EQ), no consensus has been reached concerning its definition and its measures (Zhou, 2008). According to Dechow *et al*. (2012), high quality earnings should represent the accurate current operating performance of the firm. It should effectively indicate the firm's operating performance in the near future and as well as provide a useful measurement of the value assessment of the firm. On the other hand, the definition provided by Schipper and Vincent (2003) concentrated on the decision usefulness as the defined EQ as "the level to which reported earnings accurately reflect income" (Schipper & Vincent, 2003, p. 98).

Ismail, Dunstan and Van Zijl (2010) described EQ as the absence of earnings management (EM). In addition, earnings is the output from all company transactions that reflect the quality of the plans and policies set by managers and are considered an important criterion to evaluate the company directors. Based on this statement, the earnings should be true and fair to reflect a company's image.

The EM is used as a proxy to reflect the EQ. High EM means low EQ and vice versa (Dechow *et al.*, 2012). EM is the change or management of the process of financial reporting to obtain private benefit (Schipper & Vincent, 2003). Dechow and Dichev (2002) claimed that the managers use EM in financial reporting to mislead

[2] All these studies are detailed under the subtitles of board of directors' effectiveness and audit effectiveness.

stakeholders concerning the actual financial position of the company or to manipulate firm value. Ronen and Yaari (2008, p.25) defined EM based on three colours, White EM: "EM refers to the leveraging of selection of accounting treatment that relays the manager's private information regarding future cash flows, grey EM refers to the selection of an accounting treatment that is neither opportunistic, in that it is not limited to maximized management utility nor economically efficient, and lastly, black EM refers to the use of misrepresentation on or the minimized transparency of the financial reports."

There are two types of EM. First, is accrual based EM, in which management use accruals to manage earnings; because the accruals account for equal discretionary and nondiscretionary accruals, the nondiscretionary accruals are out of management control, while the part of discretionary accruals (DA) is under the estimation of management who can use it to manage earnings and mislead financial users to obtain some personal benefit or attain some analysis target; this type is the bad EM. Second is real EM, which Roychowdhury (2006) defined as "departures from normal operational practices motivated by managers' desire to mislead at least some stakeholders into believing certain financial reporting goals have been met in the normal course of operations". He examined the real EM activities through manipulation and found evidence suggesting discounts in the price in the short term to increase sales, increase production to decrease the cost of the goods sold and discretionary expenditure to improve reported earnings.

Cohen et al. (2008) classified real EM as the three following manipulation methods: first, providing discounts to stimulate sales or granting lenient credit terms. Second,

decreasing the cost of goods by increasing production. Third is decreasing the expenses that considered discretionary such as research and development and advertising expenses. Besides, increasing the selling general and administration expenses. Real EM used as alternative method to manage earnings rather than accruals method or using these both methods to manage earnings. Xu, Taylor and Dugan (2007) mentioned that managers might manipulate the three different activities operating, investing and financing.

The bad EM, is where, as mentioned previously, managers can manage earnings and mislead financial reporting users using DA. The managers-shareholders information asymmetry encourages managers to use discretionary measures in their report of earnings in order to maximize their utility function (Alves, 2012). In theory, the present value of future cash flow is viewed as the company value, and, thus, any increase in earnings reflects the increase in the company's overall value and vice versa and when losses are attributed to the company, EM may take place to present a positive situation (Wang, 2006). EM is thus viewed as the use of accounting choices to manipulate reported earnings to the manager's benefit. It may also be defined as the reasonableness of legal decision-making and reporting of financial outcome with the intent of achieving earnings stability (Nahandi, Baghbani & Bolouri, 2012).

EM can be good when it is used as a vehicle for the communication of management's inside information to investors. There are two good sides of EM. One is to lessen the contracting costs relating to strict and incomplete contracts, and the second is controversial in that it reveals inside information to investors (Sun, 2012).

The financial accounting information quality should be useful to all relevant parties creating or using financial statements. EQ indicates the overall financial information quality in previous studies (Abdul Latiff & Taib, 2011; Gaio, 2010; Schipper & Vincent, 2003; Zhou, 2008). The FASB is a conceptual framework, which indicates that decision usefulness is a suitable benchmark used to analyse the effectiveness and quality of accounting information (Concepts Statement No. 2, FASB 1980, Paras. 30 and 32).

Earnings quality (EQ) is one of the top characteristics of financial reporting systems (Ewert & Wagenhofer, 2011). According to Gorgieva-Trajkovska and Kostadinovski (2012), high quality financial reporting is believed to enhance the efficiency of the capital market and thus investors and other users would be interested in high quality financial accounting information, such as standards setters try to create accounting standards as such modifications in corporate governance and internal control contribute to the EQ. Earnings quality has been addressed in many empirical studies for the following reasons: to present the changes in trends over time, to evaluate the financial accounting standards changes in institutions in terms of enforcement and corporate governance, to conduct a comparison of financial reporting systems in various countries, and to study the impact of EQ on the quality of financial reporting (Mojtahedi, 2013).

Specifically, prior studies have looked at the role of the many factors found in the literature, which include corporate governance comprising board of directors (BOD), internal audit, audit committees (AC) and external audit, and the level to which the mentioned factors have influenced the realization of the transparency of financial

reports in the absence of manipulation, fraud, and misleading financial statements. For example, Ismail *et al.* (2010) examined the association between the governance mechanisms and the quality of earnings (modified Jones, model (1991) as a proxy), following the implementation of the MCCG in 2001, based on 1625 firms observations from 2003 to 2007. They revealed that the size of both BOD and AC are positively related to the EQ level. In addition, Saleh *et al.* (2005) studied the relationship between the effectiveness of some board characteristics (CEO duality, independence and size) and managed earnings (proxied by DA). They found a negative association between management ownership, multiple directorships and EM, and a positive association between CEO duality and EM. The result also shows an insignificant association between board independence and EM in firms with CEO duality.

Furthermore, using DA, Saleh *et al.* (2007) studied AC effectiveness as a score (independence, size, frequency of meeting and knowledge) as a monitoring mechanism. They found the AC score and EM have a negatively relationship, and that these characteristics play a monitoring role in reducing the practices of EM. However, Abdul Latiff and Taib (2011) examined the relationship between AC score as a monitoring mechanism (independence and financial expertise) and EQ in years 2005 and 2006 using a sample of 213 companies listed on Bursa Malaysia. The study found an insignificant association between AC score and EQ.

2.5.1 Earnings Quality Measurements

The basic indicators of EQ are accruals due to its importance (Al-Dhamari & Ismail, 2012; Hashim & Devi, 2007; Ismail *et al.*, 2010; Saleh *et al.*, 2005; 2007). Prior

studies use the accounting-based and market-based measures of EQ (Hunton *et al.*, 2011; Saleh *et al.*, 2007; Shiri, Vaghfi, Soltani & Esmaeli, 2012). Accounting-based measures assume that higher quality earnings allow for better estimation of future cash flows, earnings, or earnings components. In general, more persistent, more predictive, and less managed earnings lead to higher EQ (Hwang & Lee, 2012; Penman & Zhang, 2002). Earnings are also supposed to be higher quality when accrual estimation errors are lower (Dechow & Dichev, 2002).

Researchers have also taken up different measures for the measurement of EQ, and they summarized that the most widely utilized measures of EQ include persistence and predictability, accrual quality, smoothness, value relevance, timeliness and conservatism (Ball, Kothari & Robin, 2000; Basu, 1997; Dechow, Go & Schrand, 2010; Jones, 1991; Lipe, 1990).

2.5.1.1 Persistence and Predictability

An earnings number characterized by the annuity of expected future cash flows has a tendency to be persistent as well as predictable. Persistent and predictable earnings are considered as having higher quality when they are sustainable (Zhou, 2008). Higher quality earnings was defined by Penman and Zhang (2002), and Richardson (2003) as persistent earnings while Lipe (1990) made use of predictability and persistence to indicate quality of earnings. Predictability refers to the past earnings ability to predict future earnings. The distinction between predictability and persistence is that the former is described as the function of the average absolute magnitude of annual earnings declared while the latter in time-series of earnings refer to the earnings autocorrelation (Lipe, 1990).

Francis, LaFond, Olsson and Schipper (2004), Richardson (2003) and Zhou (2008) measured earnings persistence in the form of the slope coefficient from a regression of current earnings for every share on lagged earnings for every share, whereas the predictability of earnings series is measured as the variance of the earnings declared, computed by the variance of estimation residuals of the persistence regression. Zhou (2008), however, argued that persistence and predictability are not enough to determine high quality earnings. In situations where EM takes place intentionally, the earnings number will mislead investors.

In summary, the strength of persistence and the predictability of earnings is the fact that it is suitable to reflect the expected cash flows in a summary metric for the valuation of equity, while its weaknesses include the difficulty to control the persistence of the basic earnings process (a likely contributor to persistence of reported earnings). Therefore, it is quite challenging to form statements concerning the impact of measurement on persistence. Higher persistence may be possible through opportunistic EM (Dechow *et al.*, 2010).

2.5.1.2 Smoothness

In the early period of 1953, Hepworth proposed some motivation for firms to smoothen their period income. Firms generally smooth income owing to the tax advantages, and, in doing so, a relatively stable level of periodic income will guarantee a good relation with investors and workers (Hepworth, 1953). Hepworth (1953) added that the confidence of firm owners and creditors would increase towards corporate management, which is capable of reporting smoothened earnings compared to if significant fluctuations of reported earnings were presented.

According to Lambert (1984), the reason behind managers' smoothing of income is to smooth managerial compensation, while Trueman and Titman (1988) attributed it to the desire of management for investors to perceive that their firms are not risky. They claimed that by smoothing income, managers are able to minimize the estimate of different claimants of the firm regarding the volatility of its underlying earnings process. This, in turn, decreases their assessment of the potential for firm bankruptcy. However, whatever the motivation behind income smoothing, the concern lies in the assessment of its impact upon EQ and whether it is a good or a bad attribute.

A theoretical model was proposed by Chaney and Lewis (1995) in their attempt to examine whether or not the smoothing process leads to informative earnings. Their findings showed that through the smoothing of reporting earnings around the expected earnings reports, high-type management could reduce the noise in their reports, and, hence, enable investors to increase the accuracy of their firm value assessment.

Moreover, Francis *et al.* (2004) considered smoother earnings as high quality earnings with the attributes derived through the use of accounting numbers. The study of Francis *et al.* (2004) classified smoothing earnings as accounting based EQ attributes. Smoothing income may help the reader in their assessment of the firm's future forecasts by improving the usefulness of information relayed for the purpose of prediction, but it is hard to separate the smoothed reported earnings from artificial smoothing (Dechow *et al.*, 2012).

2.5.1.3 Value Relevance

Ball and Brown (1968) initiated the trend of examining the contemporaneous relationship between stock return and accounting earnings. The return-based method assesses the ability of earnings to explain returns and acts as a measure of the accounting information relevance. In cases where the information contribution of earnings to investors is found to be significant, then earnings should reflect a considerable explanatory strength in terms of market returns, which reveals a consideration of the returns/earnings correlation, or what is commonly known as the R^2 of the regression of stock returns on earnings this measures the information contribution of earnings to relevant investors (Lev, 1989).

Several researchers have made use of this contemporaneous relationship in their assessment of the usefulness of financial information. Primarily, prior studies such as Ball & Brown, (1968) and Dechow *et al.* (1995) compared the value of the relevance of earnings components. Dechow *et al.* (1995) noted an increase in the value relevance of accruals with the decrease in the interval of performance measurement, the increase in the firm's working capital requirements, investment, and financing activities volatility, and the increase in the operating cycle of the firm. In addition, Zhou (2008) cited the use by Collins, Maydew, and Weiss (1997) of the time series trend in their investigation of the changes in the value relevance of earnings over the past four decades. They showed that while the incremental value-relevance of bottom line earnings has dipped, the increasing value-relevance of book values takes its place. The studies by Lev and Zarowin (1999), and Francis and Schipper (1999) made use of value relevance as measured by R^2 of the regression of the return/earnings in order to investigate financial reporting's usefulness.

2.5.1.4 Timeliness and Conservatism

Watts (2003, Page 16) defined conservatism as "the differential verifiability needed to recognize profits versus losses". Accountants are frequently prudent and are inclined to require a higher level of verification in their acceptance of good news as gains compared to their acceptance of bad news as losses (Basu, 1997). On the other hand, timeliness refers to the timely incorporation of economic losses in accounting income.

Accounting conservatism is linked to the agency contention in light of the anomaly in accruals (Watts 2003). For instance, the contracting explanation of conservatism postulates that conservatism is utilized by shareholders and others to decrease agency problems. Agency problems, from the separation of ownership from control, result in the shareholders' demand for mechanisms to make sure that management act according to shareholder's interests (Fama & Jensen, 1983).

The literature is rife with arguments in favour of the notion that conservatism and timeliness of earnings are positive earnings attribute (Zhou, 2008). One of these arguments came from Watts (2003) who contended that conservatism could limit managerial opportunistic behaviour and eliminate managerial biases with asymmetrical verifiability requirements, and as such conservatism leads to the increase of EQ. Dietrich, Muller and Riedl (2007) also contended that conservative accounting allows the monitoring of managers, debts and other contracts, and is a crucial part of corporate governance. Timeliness and conservatism together, sometimes called transparency (Ball & Shivakumar, 2005), are desirable attributes of earnings. The empirical results of previous studies show that, on average, firms with

a controlling shareholder are associated with both lower accounting conservatism (lower EQ) and lower absolute abnormal accruals (higher EQ) than firms with no controlling shareholder (Penman & Zhang, 2002; Watts, 2003). Although the results imply both lower and higher EQ for firms with a controlling shareholder compared to firms with no controlling shareholder, the lower (higher) absolute abnormal accruals (EQ) simply reflect less conservative accounting practice by firms with a controlling shareholder.

2.5.1.5 Accruals Quality

In light of high quality financial reporting, the correct choice would be the one that best presents the economics of the underlying transaction. Financial reports are drawn up on an accruals basis, which leads to the creation of EM opportunities, as managers are required to make forecasts, estimates and judgments to decide the amount of accruals presented in the financial statements (Dechow *et al.*, 1995; Dechow, Ge & Schrand, 2010). Earnings quality can be enhanced when accruals smooth out-value irrelevant fluctuations in cash flows; however, this approach would lead to a decrease in EQ. Large accruals, particularly discretionary accruals (DA), reflect EM (Zhou, 2008). DA can be separated from total accruals with the help of empirical methods, such as the Jones (1991) model, the modified Jones model (Dechow *et al.*, 1995), extended modified Jones model (Kasznik, 1999; Yoon *et al.*, 2006) and the performance-matched model (Ashbaugh, LaFond & Mayhew, 2003; Kothari *et al.*, 2005). On this basis, some researchers utilized the amount of DA in measuring EM (Dechow *et al.*, 1995; Leuz, Nanda and Wysocki, 2003). The findings indicate that management makes use of accruals, particularly DA, to increase or decrease firm earnings.

According to Dechow *et al.* (2010), the strength of the accrual base is considered as the measure obtained directly at the level of accrual-based accounting system in relation to a cash-flow based system. The weakness lies in the fact that the basic earnings process is different for firms possessing extreme accruals as this prevents interpretation. According to the above explanation, the DA approach is superior to the magnitude of accruals when measuring EQ as one of the features of their approach is the premise that estimation errors encapsulates both an increase and decrease in EM (Dechow *et al.*, 1995; Jones 1991; Kasznik 1999; Kothari *et al.*, 2005; Yoon *et al.*, 2006).

2.6 Theoretical Framework of Earnings Quality

2.6.1 Agency Theory

The agency theory postulates that the firms are a connection of the contracts between the owners and managers who are accountable in using the firm's resources (Jensen & Meckling, 1976). The theory states that managers have more information concerning firms compared to owners, and that this asymmetry information negatively impacts the principal's ability for successfully monitoring whether or not their interests are effectively served by the agent. It would be challenging and costly for the principal to oversee the actions of the agent, and, as such, the former cannot be sure whether or not the latter has performed his duties in a proper manner. The main premise underlying the theory is the principal-agent relationship and the implementation of governance mechanisms as monitoring mechanisms that minimize the agency problems and costs, by making sure that the interests of the principal and agent are aligned. Lubatkin, Schulze, Ling, and Dino (2005) explained why the agency problem leads to corporate governance concerns. They stated that at the

agency theory's most basic level, it concerns problems arising from cooperative exchange when the principal contracts with the agent to make decisions on the former's behalf. Nevertheless, contracts have a tendency of being incomplete and exposed to hazards due to the nature of people, like self-interest, bounded rationality and risk aversion; nature of the organization like goal conflict among organizational members; and to the information asymmetry that all make it challenging and costly for principals to keep abreast of actual accomplishments.

The development of agency problems is attributed to the agents hiding of information or taking of action for their own self-serving interests. This motivates principals to invest in monitoring and in providing incentives to managers. According to Jensen and Meckling (1976), the agency theory aims to avoid or reduce the agency cost resulting from the conflict of interests between managers and owners. Agency costs are the aggregate bonding costs and the residual cost. Monitoring costs consist of the salaries and expenditures spent by owners for measuring, controlling and observing the performance of the agent. Despite the clarification of the agency theory and the agency problems above, the concentrated ownership structure still results in a conflict of interests. This problem is prevalent among external investors and corporate managers. The improvement of internal and external monitoring mechanisms could be linked to solving the agency problem but these mechanisms result in agency costs.

The provision of information can be a way to minimize agency costs, as stated by Jensen and Meckling (1976). It is contended that increased earnings quality (EQ) could result in increased disclosure, and, hence, transparency is a way to reduce the

information asymmetry existing between the owners and agents, minority and majority shareholders, and, in turn, to reduce agency costs. The agency theory postulates that EQ is a mechanism of disclosure, which reduces the costs stemming from management-shareholders, minority-majority shareholders conflicts and from firm-creditors conflicts (Jensen & Meckling, 1976).

In a related study, Fischel (1982) claimed that as residual claimants appear on the firm's income, shareholders are desirous of agents (managers) to increase firm wealth. Due to the inability of the managers to capture all the gains if they are successful, and that they do not suffer the entire losses if they fail, they are less motivated to increase wealth compared to when they themselves are the principals. Managers are in fact motivated to take advantage of excess leisure, perquisites and be less dedicated to maximizing wealth compared to if they were the principals.

According to Saleh *et al.* (2005) ineffective corporate governance may lead to higher earnings management (EM) in Malaysia, and Leuz *et al.* (2003) reported that EQ is higher when EM is decreased. According to the agency theory, the board of directors (BOD) and its role of coordination, the presence of outside directors may affect the quality of directors, which may lead to enhanced financial reporting quality (Klein, 2002).

However, this study will use the agency theory to investigate the effects of governance internal monitoring mechanisms (BOD, IAF and AC) on the EQ of financial statements in reference to prior studies (Abdul Latiff & Taib, 2011; Ball & Shivakumar, 2005; Dechow & Dichev, 2002; Gaio, 2010; Garcia *et al.*, 2012;

Hashim & Devi, 2007; Hunton *et al.*, 2011; Ismail *et al.*, 2010; Shiri *et al.*, 2012; Vafeas, 2005). The agency theory provides a reasonable explanation of the relationship between the governance of internal monitoring mechanisms and EQ as a proxy of financial reporting quality. Thus, using the agency theory in this study is an appropriate approach.

2.6.2 Resource Dependence Theory

Despite the fact that the agency theory is the dominant theory used in most research dedicated to the BOD (Hillman, Withers & Collins, 2009), this is the field where the resource dependence theory has much influence. Pfeffer and Salancik (2003) contended that boards allow firms to decrease dependence or gain resources. Prior literature concerning the BOD concluded that the resource dependence theory is reinforced more than other board theories with the inclusion of the agency theory (Jensen & Meckling, 1976; Zahra & Pearce, 1989). Hence, despite the less commonly used aspect of the resource dependence theory in studying boards, to date, the empirical evidence confirms that it is a more successful platform for explaining boards.

In order to improve the information flow and mitigate uncertainty to ensure the firm's resources, the resource dependence theory posits that the board is represented by external directors to assist the board's role in monitoring managers (Yunos *et al.*, 2010). The agency theory and resource dependence theory emphasizes that independent directors on the board are very important for enhancing internal monitoring effectiveness (Fama & Jensen, 1983). Moreover, independent directors on the boards could protect firms' resources and reduce information asymmetry by

improving the information flow between the firms and stakeholders (Pfeffer & Salancik, 2003).

Previous studies employing the resource dependence theory to investigate boards, concentrate on board size and its composition to indicate the board's ability to provide the firm resources needed. For instance, Pfeffer (1972) revealed that board size is linked to the firm's environmental requirements and that those with higher independence and expertise need a greater ratio of external directors. He concluded that the board size and composition are not just any other factor or independent factor, but they are rational organizational responses to the external environment conditions; he reinforces this contention in another replicated study (Pfeffer, 1973).

Other studies, by Sanders and Carpenter (1998), and by Hillman, Withers, and Collins (2009), also supported this contention. They revealed that board size is linked to the firms' level of internationalization, with the latter reflecting environmental dependence. Other studies also examined the board size-performance relationship as an indicator of the successful strategy of resource dependence. For instance, Dalton, Daily, Johnson and Ellstrand (1999) conducted a meta-analysis that revealed a positive association between board size and firm financial performance. Despite the above evidence and support, many scholars still highlighted the simplistic solution provided by board size, implying a need for a more complex understanding.

For instance, Zahra and Pearce (1989) contended that board composition and size depend on the external environment as well as the firm's current strategy and previous financial performance (Hillman *et al.*, 2009). In addition, based on the view

of the resource dependence theory, more financial expertise on the board is a very important source to enhance the financial reporting quality. Additionally, firm get benefits from independent and expertise of directors during the board meetings.

2.7 Corporate Governance and Earnings Quality

In the early 1990s, corporate governance began to attract increasing attention in the field of research for two reasons. First, the changes in the company governance brought about by new technologies, globalisation, competition, and social and environmental concerns, and, second, resulting from the financial scandals in many companies in the world, which were brought about by the conflict of interests between owners and managers (Hashim & Devi, 2007). The conflict called for the need to establish governance regulations to monitor the actions of the managers in the companies (Ismail *et al.*, 2010).

Corporate governance is defined by the Cadbury Report (1995) committee as "the system by which a firm is directed and controlled". The usual view that focuses on the board of directors (BOD) also perceives the way that the BOD leads a company. Some corporate governance issues were addressed by the Cadbury Report (1992), in particular, the report provided an extensive discussion of the BOD roles and the importance of its independence from management, its sufficient member composition of external directors, and the separation of the chairman of the board's roles from that of the CEOs (Abdullah & Nasir, 2004).

The High Level Finance Committee Report in the Malaysian Code on Corporate Governance (1999, p.10) defined corporate governance as "the way in which the top

management of the firm are monitored and disciplined according to the primary aims of enhancing the long-term value of stakeholders". The report adds that corporate governance is the process and structure with which the business and affairs of the company are directed and managed towards improving business sustainability corporate accountability. According to the report, the ultimate objective of the corporate governance is to establish long-term shareholder value, while taking into consideration the stakeholders' interest. Additionally, the Malaysian High Level Finance Committee defined corporate governance as "the structure that manages and directs the company's business and affairs towards improving corporate accountability and business success with an aim to achieve shareholders long-term value, while taking the stakeholders' interests into consideration" (MCCG 2012, p.3).

On the same line of corporate governance description, Cohen, Krishnamoorthy and Wright (2004) cited the definition provided by the Public Oversight Board (POB 1993) of corporate governance as "the oversight activities conducted by the BOD and audit committee (AC) to guarantee the integrity of the financial reporting process" (page 2). However, the above definitions restrict corporate governance to monitoring activities, which may lead to the undervaluing of the role it plays.

Corporate governance is critical from the viewpoint of both the economy and finance. The economic point of view purports that an efficient corporate governance structure is capable of allocating limited funds to investment projects with the highest returns. The finance aspect relates to the importance of corporate governance in reinforcing the invested funds and in producing returns. The ultimate objective of

corporate governance is to produce reliable financial reports, upon which the investment decisions can be taken to produce sufficient returns (Bin-Zulkafli, Addul Samad & Ismail, 2007). Corporate governance monitoring mechanisms, such as BOD and AC in particular, are accountable for monitoring managers on behalf of the shareholders and monitoring process of financial reporting by company law, therefore the BOD and AC should play a role in increasing earnings quality and improving the reliability and integrity of financial reporting (Nekhili, Fakhfakh, Chtioui & Lakhal, 2015).

2.8 Corporate Governance in Malaysia

The Asian 1997 financial crisis shed light on the weak corporate governance and governance standards, especially, weak BOD as a monitoring mechanism, which contributed to the crisis, and the implementation of corporate governance mechanisms that have been conducted stage by stage to develop a good corporate governance reputation in Malaysia (Nam & Nam, 2004). Both the Finance Committee on Corporate Governance (FCCG) and the Malaysian Institute of Corporate governance were established in 1998 to conduct a review and reform of the country's corporate governance system. The Malaysian Code on Corporate Governance was established in March 2000. This code covers four areas relating to accountability, BOD, remuneration of directors and shareholders. The code was later revised in 2007 (2007 Revised Code) in an attempt to improve the BOD expertise. The revised code (MCCG 2007) states that all audit committee members should have financial expertise. In addition, all AC members should be nonexecutive directors and the majority should be independent directors. Moreover, the board should lay down other corporate governance mechanisms to improve internal control

monitoring in the form of an internal audit function (IAF) that is accountable to the AC (Hassan *et al.*, 2010). The revised code (MCCG, 2007) introduced different recommendations with the hope of improving the financial reporting quality through mechanisms to control the accountability of organizations (Abdullah, Yusof & Nor, 2010). In the context of developing nations like Malaysia, the implementation of good corporate governance practices reduces the susceptibility of the firm against financial crisis and contributes to the development of economic sustainability (The World Bank Report, 2005).

The new Malaysian Code on Corporate Governance in 2012 (MCCG, 2012) stated that the role of BOD should not be focusing on setting strategies only but they should extend their role to be effective stewards and guardians of the firms. They should ensure that the firm is complied with laws and ethical values. Besides, they are required to maintain an effective structure of corporate governance that would guarantee an appropriate risk management and internal controls. The new code concentrates on explaining the role of the board in providing leadership, improving the effectiveness of the board through supporting its composition and independence. The code (MCCG, 2012) also covered the additional improvements, such as multiple directorships, and ensuring a timely level of internal control and high quality disclosure.

Table 2.1
Reforms that Took Place after the 1997 Financial Crisis

Year	Corporate Governance Reforms
1998	The formation of the High Level Finance Committee to conduct a detalid study on corporate governance and to make recommendations for improvements.
1998	The Malaysian Institute of Corporate Governance (MICG) was established to look into the improvements of corporate governance practices in Malaysia.
1999	A new Malaysian Code on Takeovers and Mergers was introduced.

Table 2.1 (continued)

Year	Corporate Governance Reforms
2000	The establishment of Malaysian Code on Corporate Governance (MCCG).
2001	The Audit Committee must have a member who is financially trained.
2004	Best practices for corporate disclosures.
2007	Revised Malaysian Code on Corporate Governance (MCCG).
2008	Code of Best Practice on Corporate Governance.
2010	Audit Oversight Board (AOB) is established to promote and develop an effective audit oversight framework and to promote confidence in the quality and reliability of audited financial statements in Malaysia.
2012	Malaysian Code on Corporate Governance (MCCG).
2013	Code of Best Practice on Corporate Governance (BPCCG 2013).

Sources: Che Haat (2006), (MCCG 2012), (BPCCG 2013)

2.9 External Monitoring Mechanisms

External monitoring mechanisms including the external audit firm, analysts and institutional ownership are effective forms of external monitoring to mitigate earnings management and enhance financial reporting quality. Frank, Johnson and Nelson (2002) found that audit fees (proxy for audit quality) are associated with smaller discretionary accruals. Also, Ye (2014), and Soliman and Ragab (2014) found that firms audited by Big4 audit firms (proxy of audit quality) have less earnings management. Yu (2008) found that the analysts, as external monitors, are effective in mitigating accrual based earnings management. Institutional ownership is an external governance mechanism, because institutional investors are efficient in monitoring (Chung & Zhang 2011).

2.10 Internal Monitoring Mechanisms

Internal monitoring is a very important mechanism that could lead to a high quality of earnings and financial reporting. Cohen *et al.* (2004) declared that managers are not able to manage earnings and that information symmetry would be minimized under such an intensive-monitoring environment, which leads to comprehensive disclosure, and an improvement in financial reporting quality.

The system of corporate governance can assist in ensuring the effective division of authority among shareholders, board of directors and managers. According to Bujaki and McConomy (2002), investors base their investment decisions on the corporate governance records of firms, and, thus, have a tendency to pay more for shares of firms that are governed properly rather than those that are not. The demand for properly governed companies can be explained by the corporate governance role in the firm's overall risk management strategy. In addition, the high earnings management (EM) and weak corporate governance may increase the demand of internal monitoring, which would suggest a negative relationship between internal monitoring mechanisms and the EM (Krishnan & Lee, 2009).

The significant concern in corporate governance is the designing of effective internal monitoring mechanisms that encourage managers to act in the shareholders' best interests, as the agency theory postulates that managers are agents, while shareholders are principals in which the former works on behalf of the shareholders (Jensen & Meckling, 1976). Therefore, effective corporate controls are called for to solve the problem of asymmetric information and market failure (Heath & Norman, 2004). However, a contrasting internal monitoring viewpoint was provided by Burkart, Gromb and Panunzi (1997). They claimed that excessive internal monitoring limits the managerial initiative. Similarly, the Cadbury Report (1992) contended that too much internal monitoring may hinder managerial entrepreneurship.

Basically, the agency theory has been widely used as the underpinning concept in research on the implementation of corporate governance devices to oversee the

management of publicly traded corporations. The agency theory focuses on internal monitoring, such as board of directors, audit committee (AC) and internal audit function (IAF) in reducing agency problems that are derived from the separation of owners as principals, and managers as agents in modern corporations. In addition, one of the fundamental agency theory mechanisms proposes to address the agency problem of internal monitoring. Furthermore, the agency theory has been used in the existing academic literature to explain the role of corporate governance mechanisms in increasing earnings quality (EQ) as a proxy for the financial reporting quality in Malaysia (Abdullah 1999; Hashim & Devi 2007; Ismail *et al.*, 2010).

2.10.1 Board of Directors' Effectiveness

The definition of governance sheds light on the important role of the boards as an agent that directs and controls firms, and relays authentic information to shareholders (Ow-Yong & Kooi Guan, 2000). In other words, the board of directors (BOD) is responsible for monitoring the firm on behalf of the shareholders and of managing and directing the firm to realize corporate objectives by overseeing management actions and safeguarding the interests of shareholders (Abdullah and Nasir, 2004). Additionally, the board is considered to be the most influential and cost effectual corporate governance mechanism that oversees management, and, at the same time, guarantees that it undertakes actions that raise the value of the firm (Abdullah & Nasir, 2004).

The BOD has the responsibility of governance over companies while the shareholders are responsible for appointing directors and auditors for their assurance of the presence of suitable governance structures. The board responsibilities perform

two functions: monitoring management and providing expert advice. The actions of the board are covered by laws, regulations and the shareholders in the general meeting (Cadbury Report, 1992).

The Malaysian Code on Corporate Governance (MCCG, 2001) mandated that the BOD is responsible for the strategic review and adoption of the company's strategic plan, the identification of major risks, and ensuring that suitable systems are in place for risk management. It is also responsible to oversee how the business is run, to evaluate whether or not it is properly managed, to draw up succession planning that covers the appointment, training, compensating, and replacing management as well as reviewing the sufficiency and integrity of the company's internal control systems and management information systems. This includes compliance systems for the current laws, regulations, rules, directives and guidelines.

The agency theory argues that increasing the board of director's effectiveness will reduce agency conflict. On the basis of the agency theory, several studies have examined the BOD' influence upon financial reporting. In this regard, the BOD are considered to be a crucial governance mechanism to mitigate the self-serving behaviour of management (Yunos *et al.*, 2010). The theory posits that boards will improve the financial reporting in terms of its integrity through the control of management. Added to this, the BOD ensures the effective role of the AC, IAF, enhanced EQ and financial reporting quality. Therefore, the board is considered to be the highest-level of the control mechanism in a firm and has the authority to counter the decisions made by management (Fama & Jensen, 1983). The characteristics of the board, which may also influence its monitoring effectiveness, are composed of

independent directors, non-executive directors, size, financial expertise and frequency of meetings.

Moreover, the BOD is among the important elements in internal corporate governance mechanisms as a monitoring device. Hashim and Devi (2007), and Saleh *et al.* (2005) described the board as the core institution in the company's governance, which has the main monitoring task of dealing with agency issues. Similarly, Fama and Jensen (1983) claimed that through the exercise of its power of monitoring and controlling management, the board could facilitate the reduction of conflicts based on the notion that management may have their own interests at heart and may act upon them to the disadvantage of shareholders. Moreover, the BOD, as an internal corporate governance mechanism, ensures sufficient returns for shareholders (Hermalin & Weisbach, 1991). Among the board's duties are the optimization of shareholder's value, and the protection of various stakeholders' interests against the selfish actions of management (Hermalin & Weisbach, 1991). Adams, Hermalin and Weisbach (2008) claimed that the BOD is the optimal solution to the agency issues that current companies are facing.

Several studies have examined the association between characteristics of the BOD and EM (Gonzalez & Garcia-Meca, 2014; Johari *et al.*, 2008; Klein, 2002; Rahman & Ali, 2006; Saleh *et al.*, 2005; Siagian & Tresnaningsih, 2011). It has been contended that an effective board may lead to reduced EM, and, in turn, increase the quality of earnings. Specifically, Alzoubi (2012) contended that the BOD is the main factor that produces quality earnings information and affects the financial reporting quality.

2.10.1.1 Board Size

The size of the board or the number of directors is a key factor in measuring board effectiveness (Ahmed, Hossain and Adams, 2006; Hunton *et al.*, 2011; and Ismail *et al.*, 2010). According to the resource dependence theory, the larger the size of the board, the better the corporate performance, as skills, knowledge and expertise are brought into the boardroom discussion. Increasing the number of directors would enhance its effectiveness in supporting management and in minimizing the agency cost stemming from poor management, which would result in higher financial outcome and EQ (Jensen & Meckling, 1976). Similarly, Ismail *et al.* (2010) contended that larger board size would lead to enhanced corporate performance, as directors are more capable and possess more expertise in helping management make decisions and more challenging for CEOs to manipulate, which would lead to enhancing governance, particularly company management and financial performance. In addition, boards with more members are also more capable of providing opportunities for enhancing board diversity in terms of experience and skill sets.

There is inconsistency in the findings reported by empirical studies as to the size of the board. To begin with, Bonn, Yoshikawa and Phan's (2004) study involved firms in Japan and Australia. They revealed a negative relationship between the size of the board and firm performance in the case of both firms, and a negative relationship between board size and firm performance in the case of Japanese firms; however, with Australian firms they revealed no relationship. In a similar study, Di Pietra, Grambovas, Raonic and Riccaboni (2008) found that a large board slows down the performance of SMEs but not in large firms. In relation to the firm business

complication, Coles, Daniel and Naveen (2008) demonstrated that a large board is invaluable to complex firms as they provide a greater advisory function, greater level of diversification and considerable financial leverage. Dalton and Dalton (2005) argued that when few members of the board are occupied with decision-making, this makes them less effective in overseeing management. In line with the argument of Dalton and Dalton (2005), Xie *et al.'s* (2003) study in the US found that having more members on the BOD is associated with lower discretionary accruals (DA). A similar result was reported by Ye (2014) in China. However, Uwuigbe, Peter & Oyeniyi (2014) found that an increase in board size is associated with high DA. Nevertheless, Katmon & Al Farooque (2015) found no significant relationship between board size and DA among 290 U.S. firm-year observations for year from 2005 to 2008.

In addition, some previous studies suggested that large board size does not affect board monitoring because too many people in the same location cannot effectively work together, are less effective to monitor management, result in meaningless and time consuming discussion as there are too many directors involved (Jensen, 1993; Lipton & Lorsch, 1992), contribute less to strategic decision-making (Judge & Zeithaml, 1992) and complicate coordination (Forbes & Milliken, 1999).

Previous empirical studies found that the large board size is related to low firm performance (Cheng, 2008; Dimitropoulos & Asteriou, 2010; Guest, 2009; Mak & Li, 2001), with high EM (Abdul Rahman & Ali, 2006; Gonzalez & Garcra-Meca, 2014) and with low earnings informativeness (Ahmed *et al*., 2006). In addition, Lu and Chang (2009) found that large board size is associated with an increase in the occurrence of financial distress in Taiwanese firms. They found that 9.24 is the

average size of board in financially distressed firms and 7.24 is the average board size in healthy firms. This is a similar finding to Lipton and Lorsch (1992), and Jensen (1993) who contended that if the board comprises more than 8 members, the board is ineffective. Vafeas (2000) found that fewer members of boards of directors is associated with higher EQ suggesting that smaller board sizes increase the quality of earnings.

In the context of Malaysia, Ismail *et al.'s* (2010) and Razak and Palahuddin (2014) findings showed partial support for Dalton and Dalton's (2005) contention in that they revealed a positive association between board size and EQ relationship owing to the considerable number of independent directors on the board. Based on 1625 Malaysian firm-year observations during the period 2003-2007, the board of director's size was found to be positively associated with the level of EQ indicating that a large BOD is more effective in performing governing roles compared to a smaller BOD. However, Abdul Rahman and Ali (2006) found that an increase in the size of the BOD decreases EQ. Additionally, Buniamin, Johari, Rahman and Rauf (2012), Mohamad *et al.* (2012), Saleh *et al.* (2005), Salleh and Haat (2014) and Shawtari et al. (2015), reported that there is no significant association between board size and EQ.

Therefore, it can be concluded from the review of the above studies that a large board size facilitates enhanced knowledge and skills exchange but there exists a significant risk of lack of coordination and cooperation.

2.10.1.2 Board Independence

Board of directors' independence concerns the outside directors and non-executive directors appointed on the company BOD (Yunos, *et al.*, 2010), in relation to a separate system of control and decision. Fama and Jensen (1983) suggested that independent directors are good when they are able to control and make decisions. Independent directors should be independent from management and from controlling shareholders. The Malaysian Code on Corporate Governance (MCCG, 2000) requires that firms should appoint at least one third of independent non-executive directors on the board. Previous studies measured the board of directors independence by the proportion of independent members on the BOD to the board size (Abdul Rahman & Ali 2006; Gonzalez & Garcra-Meca, 2014; Mohamad *et al.*, 2012); the dummy variable is based on the number of independent members on the board (Davidson, Goodwin-Stewart & Kent, 2005; Klein *et al.*, 2002).

Fama and Jensen (1983) mentioned the board effectiveness in monitoring as being dependent on the board of directors' independence, and that the level of board independence is the basic reason behind the board monitoring quality. Jensen and Meckling (1976) stated that boards that have non-executive directors might facilitate the mitigation of agency problems by monitoring and controlling the self-serving behaviour of management.

The agency theory suggests a direct link between performance and board composition, in that independent directors are better able to limit opportunistic behaviour on the part of managers (Rashid, De Zoysa, Lodh & Rudkin, 2010). The resource-dependence theory postulates that a direct relationship exists between the

composition of the board and its performance indicating that the board should be composed of directors who are capable of providing an interface between the company and its investors (Hillman & Dalziel, 2003; Holder-Webb & Sharma, 2010; Johnson, Daily & Ellstrand, 1996). Kesner & Johnson, (1990) argued that more independent should be on the board as external resources due to their expertise, prestige and contacts.

Prior studies suggested that board of directors' independence has a positive influence on the company. Beasley (1996) examined financial statement fraud, and compared board composition between firms where fraud exists and those where no fraud exists, and found that firms that had more independent directors had no fraud. Peasnell, Pope and Young (2005) found evidence that independent directors mitigated EM, which increases the EQ in UK firms.

Empirical evidence showed that independent directors had a negative relation with abnormal accruals, which, in turn lead to high effectiveness of corporate governance which enhance the financial reports quality (Bekiris & Doukakis, 2011; Chen *et al.*, 2007; Davidson, *et al.,* 2005; Gonzalez & Garcra-Meca, 2014; Klein, 2002; Park & Shin, 2004; Uwuigbe, *et al.*, 2014; Xie *et al*., 2003). Furthermore, Koh, Laplante and Tong's (2007) examination of Australian firms and Benkraiem's (2009) study of French firms highlighted the important role of independent BOD in minimizing EM. Along the same lines, evidence from developed countries, such as the studies conducted by Beekes, Pope, and Young (2004) in the UK, and by Klein (2002) and Xie *et al.* (2003) and Alves (2014), in the US, and other evidence from Australia by Davidson *et al.* (2005), supported that a high proportion of independent directors on

the board is related to a high degree of authentic accounting and high EQ. Additionally, other studies show that having external directors on the board was effective in limiting EM (Chen *et al.*, 2007; Peasnell, Pope and Young, 2000; Uwuigbe *et al.*, 2014), and reducing errors in financial reporting (Beasley, 1996). However Katmon & Al Farooque (2015) and Razak and Palahuddin (2014) found insignificant association between board independence and DA.

In the context of empirical studies in Malaysia, specifically, a study by Mansor *et al.* (2013) found a significant negative relationship between board independence and EM among 264 public listed companies in 2008. Abdullah, Halim & Nelson (2014), reported that board independence is related to reduce EM among 2124 firms year-observation in the period from 2009 to 2011. However, Ameer, Ramli and Zakaria (2010) showed contrasting findings; they found that the performance of Malaysian firms was better when the BOD was composed of mostly outside directors relative to the majority of insiders. Kamardin and Haron (2011) found that the independent directors were not significantly related to the monitoring roles of the BOD, Abdullah and Nasir (2004) showed no influence of independent directors on firm EQ, and Abdullah (2006) revealed that non-executive directors were only effective in a financial crisis, because, during a crisis, investors expected firms to produce financial reports in a timely manner. In addition, Saleh *et al.* (2005) reported that high board independence is unable to limit EM.

Following the initiation of MCCG, a study by Abdul Rahman and Ali (2006) concentrated on the period from 2002-2003. They found that board size was the only variable that significantly impacted EM while the board independence and AC independence, financial expertise of the members and the frequency of AC meetings

failed to show any impact. Hashim and Devi (2007) reported an insignificant relation between board independence and EQ using a sample of 280 firms listed on Bursa Malaysia's Main Market companies in 2004. Ismail *et al.* (2010) reported an insignificant association between board independence and EM using a sample of 325 firms listed on Bursa Malaysia from 2003 to 2007. Similar results by Mohamad *et al.* (2012) examined the relationship between board independence and discretionary accruals (DA) using a sample of Malaysian Government Linked Companies. In addition, Buniamin *et al*. (2012) found no association between independence of the board and DA among the sample of the top 100 companies in 2008. While, Shawtari, Mohammed & Abdullah (2015), examined the relationship between board independence and DA among 35 GLC, in 2005 and 2006, they found positively and significant relationship.

2.10.1.3 Board Financial Expertise

The directors should have accounting knowledge to be able to monitor the financial reporting process and to generate quality financial reporting either to limit earnings manipulation or to ensure that information is more transparent (Xie *et al.*, 2003). The collapse of major companies like Enron and WorldCom was attributed to the board members' lack of knowledge (Lanfranconi & Robertson, 2002). In the case of Enron, the members did not know about the complex financial planning structures used for the purpose of special entities. Similarly, in the case of WorldCom, the board was unaware of the basic accounting principles and the expenditure being capitalized as opposed to being expensed. Therefore, in the above two cases a question may be asked as to how effective the directors were in carrying out their duties.

Based on the agency theory, the board members' expertise is important in ensuring that the board has an effective monitoring role. Despite the lack of universal definition of board expertise, some studies dedicated to corporate governance in the context of audit, contended that the financial expertise of the board members represents effective monitoring (Carcello *et al.*, 2002).

Based on empirical studies (Abdullah, 1999; Burak Guner, Malmendier & Tate, 2008; Hashim & Devi, 2007; Volpe & Woodlock, 2008), financial expertise is a crucial determinant of the financial statements quality. Agrawal and Chadha's (2005) findings, from their study involving US firms, shed light on the importance of accounting knowledge among external directors. At first, they did not find independent directors to be determinants of the probability of the firm's requirement for restatement of accounts. However, upon testing the independent directors with financial expertise, they found the result to be insignificant. This finding indicates that independent directors are only useful in reducing the likelihood of financial restatements if they have financial expertise.

Studies dedicated to examining the impact of financial expertise on the board are few and most of them focused on the AC financial expertise. Although the board authorizes the AC with the oversight role of financial reporting process, the quality of reports is still the board members' responsibility. Volpe and Woodlock (2008) mentioned that boards have been given the responsibility of delegating the reviewing of major issues of accounting principle and financial statements to the AC.

Xie *et al.* (2003) examined the association between corporate governance and EM (DA as a proxy) among 110 firms from the S&P 500 in the US and found that firms that had more directors with financial expertise reported less DA. Also, Chen *et al.* (2007) studied the association between corporate governance and EM among 2237 firm-year observations from Taiwanese listed companies, and reported that board financial expertise is related to a decrease in DA (low EM).

The empirical evidence in Malaysia provided by Abdullah (1999), and Hashim and Devi (2007) also supported a positive relationship between board of directors' financial expertise and the quality of reported earnings. Furthermore, the association between the effectiveness of the board and EQ examined by Yunos *et al.* (2010) required further study into the roles of board independence in the process of financial reporting. This is especially validated as the Malaysian independent directors were reported to be characterized by a lack of expertise, skills and knowledge to understand the details of financial reporting. On the basis of the above empirical evidence, directors should possess the necessary financial skills because the lack of such skills may adversely impact their monitoring ability of management and they may overlook irregularities concerning the financial reports.

2.10.1.4 Board Meeting

A board meeting is the frequency of the board of directors' annual meetings, which reflects the commitment of the directors in the firms' board. The BOD in Malaysian listed companies meet four times yearly with additional meetings when it is necessary. The agency theory suggests that by monitoring management the boards will add to the integrity of their financial reporting. The presence of independent

directors may enhance the effectiveness of directors, which may lead to enhanced financial reporting quality when outside directors are more active and attend the board meetings (Klein, 2002). Additionally, in view of the resource dependence theory, board meetings bring outside sources, through which, during the meeting discussion, the directors bring their expertise and knowledge as important resources, which contribute to efficient decision-making.

According to Adams (2005), the number of board meetings is a good measurement for the directors' monitoring effort. In a similar line of argument, Vafeas (1999) noted that owing to the advisory role, the timing of the board meeting could improve board effectiveness in that the board can play a more significant role in overseeing management, accessing information and ensuring financial reporting quality. Frequent board meetings are expected to improve a board's effectiveness through the privilege of being able to vote on key decisions (Ronen, 2007). Frequent board meetings are important to decrease EM and lead to high EQ (Xie *et al.*, 2003).

Gonzalez and Garcra-Meca (2014) examined the relation of corporate governance and EM among 1740 observations for the period from 2006 to 2009 in Latin America and found that frequent board meetings decreases EM. In addition, Adiguzel (2013), who studied the characteristics of board and audit committees and their impact on EM among 410 firm observations in Turkey, found that frequent board meetings related to less EM. Mansor *et al.* (2013) examined the relation of frequent board meetings and EM using a sample of 264 Malaysian listed companies; they found that frequent board meetings decreased EM. However, Mohamad *et al.* (2012) examined the association between the board meetings and EQ using a sample of 35 firms

before and after the transformation of these firms to Malaysian Government Linked Companies. They found that frequent board meetings was insignificantly related to EQ in Malaysian firms before and after transformation.

2.10.2 Audit Committee Effectiveness

One of the sub-committee of the BOD is the audit committee (AC). The main aim of this committee is to achieve the legal responsibilities of board in terms of the credibility and objectivity of the financial reports (Salleh & Haat, 2014). The audit committee's effectiveness can be described in various ways. Morgan (2010) described an effective AC as one that comprised qualified members with the power and resources to protect stakeholders' interests by guaranteeing authentic financial reporting, internal controls and risk management through the effective oversight of tasks. This definition contains a detailed approach to deal with literature concerning AC effectiveness. The MCCG (2001) and the 2007 revised code emphasised that the AC should be responsible for evaluation of the integrity of the internal monitoring and risk management systems of the company. In addition, the MCCG (2012) highlighted that the AC should ensure that financial statements comply with applicable financial reporting standards.

Haron, Jantan and Pheng (2005) studied AC compliance with the Bursa Malaysia requirements based on the data of 852 companies listed on the KLSE in 2002, and reported that, in some companies (13%), their ACs did not comprise a majority of independent directors, while, in others (9%), the committees did not have members with financial expertise indicating weak implementation of requirements. In relation to the above findings, the revised code in 2007 emphasised that the AC in Malaysian

listed companies should comprise at least three members who are financially literate with the majority of them independent and non-executive directors, and that at least one member should have financial expertise.

According to Krishnamoorthy *et al.* (2002), ACs are created to help outside directors of the board to conduct their mandatory duties, specifically when it comes to ensuring audit quality and overseeing financial reporting. The AC duties include the selection of external auditors, reviewing the firm's financial statements, audit process, and internal accounting controls, and conducting meetings separately with senior financial managers and auditors (Cadbury Report, 1992).

Moreover, the AC has to be able to question management, internal auditors and external auditors concerning their decisions as they are acting in the best interests of the firm. It has therefore been claimed that active ACs are significant internal mechanisms that minimize agency cost through their overseeing of the financial reporting process and reinforcing the role of internal auditors. This could lead to the enhancement of the monitoring of corporate financial reporting and internal control, which, consequently, reduces information asymmetry (Garcia *et al.*, 2012; Ika & Ghazali, 2012; Krishnamoorthy *et al*., 2002; Vafeas, 2005). ACs could mitigate agency problems stemming from the separation of management and ownership by keeping information asymmetry as low as possible between stakeholders and management (Lin *et al.*, 2006).

In respect of the influence of the AC presence on the board and its impact on EQ, Hunton *et al.* (2011) contended that the AC is an effective monitoring mechanism that reduces agency costs and enhances the quality of earnings. Similarly, Ho and

Shun Wong (2001) stated that the AC is a governance mechanism of the company that helps management to disclose more information concerning the corporate annual reports.

ACs are an important monitoring mechanism in respect of corporate governance to improve financial reporting quality (Baxter & Cotter, 2009; Siagian &Tresnaningsih, 2011; Zhang, Zhou & Zhou, 2007), and have an important role to ensure the EQ (Ahmad-Zaluki & Wan-Hussin, 2010; Garcia *et al.*, 2012; Mohamad *et al.*, 2012) and financial reporting quality (Miettinen, 2008; Pucheta-Martínez & De Fuentes, 2007).

2.10.2.1 Audit Committee Size

Corporate governance has addressed the size of the AC in several recommendations that it established like the Cadbury Report (1992) and the Smith Report (2003). These reports mandate that the number of AC members should be at least three. Similarly, the Sarbanes-Oxley Act (2002) stipulates three as the minimum number of members in the AC. In relation to the above, the AC should consist of three to five members according to the business size and class (Buchalter & Yokomoto, 2003). In the context of Malaysia, the Revised Code on Corporate Governance (MCCG, 2007) stipulated that to be effective the AC should comprise at least three members.

Studies dedicated to examining the relationship between the size of the AC and EQ are lacking and the few that have been conducted reported mixed findings. In the context of the US, Lin *et al*. (2006), who examined 212 companies, revealed a positive AC size-EQ relationship. The study of Garcia *et al*. (2010) involved 108

Spanish companies from 2003 to 2006, and, eventually, revealed a significant and negative relationship between AC size and earnings manipulation. Moreover, prior studies (e.g. Lipton & Lorsch, 2002; Ismail *et al.*, 2010) revealed that the size of AC mitigated the manipulation of earnings. On the other hand, an insignificant finding between AC size and EQ was reported by Xie *et al*. (2003) in the US, Davidson *et al.* (2005) in Australia, Adiguzel (2013) in Turkey, and Soliman and Ragab (2014) in the context of Egypt.

Moving on to the Malaysian context, Ismail *et al.* (2010) contended that the percentage of the size of AC was related to the level of EQ. In their study involving 1625 Malaysian firm-year reports from 2003-2007, they revealed that AC size was positively related to the level of EQ, indicating that large ACs are more effective governing mechanisms compared to smaller ones. In a similar study, Ahmad-Zaluki and Wan-Hussin (2010) investigated the influence of corporate governance mechanisms on the accuracy of earnings forecast among IPO firms in Malaysia. They revealed a positive AC size-EQ relationship. In addition, Mansor *et al.* (2013) examined the relationship between corporate governance and EM among Malaysian family and non-family firms. They found that AC size is related to decreased EM. On the other hand, Salleh and Haat (2014) reported an insignificant relationship between the size of AC and EQ.

2.10.2.2 Audit Committee Independence

For the AC to be effective it should comprise non-executive directors, who are not related to and are independent from the management (Ika & Ghazali, 2012). The Sarbanes-Oxley (2002) was aimed to support the AC, and clearly assumed that

independence would enhance AC effectiveness. Several studies have been dedicated to examining the independence of directors (Abdul Latiff &Taib, 2011; Hunton *et al.*, 2011; Ismail *et al.*, 2010; Krishnamoorthy *et al*., 2002; Lin *et al.*, 2006; Siagian & Tresnaningsih, 2011; Vafeas, 2005).

In a related study, DeZoort and Salterio (2001) investigated the judgements provided by the AC members who were requested to determine their level of support for the auditor in light of management in situations that involve the recognition of proper revenue. The basic issue was the way AC independence and knowledge impact AC member's support of the auditor's position. The findings revealed that independent, highly knowledgeable AC members tended to support the auditor in respect of disputes with the manager.

From an agency theory perspective, the effectiveness of the AC is based on its characteristics (Garcia *et al.*, 2012; Ika & Ghazali 2012; Klein, 2002; Vafeas, 2005). For example, in order for the AC to achieve its duties, it should have independent members from management (Ismail *et al*., 2010; Krishnamoorthy *et al*., 2002). According to Krishnamoorthy *et al*. (2002), in order for the AC to work as an effective corporate governance control mechanism, its members should be independent from the management. Lin *et al.* (2006) argued that an AC with a majority of independent members could effectively monitor the management and reduce the opportunity for fraudulent reporting because there is less interference from management.

The empirical studies that examined AC independence and earnings manipulations are many. Among them, Klein's (2002) study involving 692 US companies showed that the independence of the AC was negatively related to abnormal accruals while reductions in this independence led to an increase in abnormal accruals. Also, the study by Yang and Krishnan (2005) using a sample of 896 firm-year observations from 1996 to 2000 in the US found a significant negative relationship between AC independence and DA. Davidson *et al.* (2005) used 434 Australian listed companies in 2000 to examine internal governance mechanisms and EM, and found that AC independence was related to lower EM. Sharma and Kuang (2014) used 194 firm-year observations, comprising 97 firms with data for both 2004 and 2005. Using a sample of 194 firms in New Zealand, they found that AC independence led to reduced EM. Similarly, Bradbury, Mak and Tan (2006) used data from Singapore and Malaysia, and reported that AC independence was related to higher EQ. While, Garcia *et al*. (2012), who used a sample of 432 non-financial Spanish firm observations from 2003 to 2006, reported an insignificant relationship between AC independence and EM. Also, the study by Katmon & Al Farooque, (2015) found an insignificant relationship between AC independence and DA.

The above results indicated that AC effectiveness is higher when the committee is composed of independent directors. In addition, there is a positive significant association between independent AC and the EQ, and quality of financial reporting (Agrawal & Chadha, 2005; Ahmad-Zaluki & Wan-Hussin, 2010; Bedard & Johnstone, 2004; Bradbury *et al.*, 2006; Klein, 2002; Saleh, Jaffar & Yatim 2013; Siagian & Tresnaningsih, 2011).

Several empirical studies are consistent with the notion that independent members improve the AC's effectiveness in overseeing financial reporting. For instance, Bedard and Johnston (2004), Klein (2002), and Xie *et al.* (2003) revealed a negative relationship between EM and the level of number of independent members on the AC in US companies. Additionally, in the US, Goh (2009) revealed that more independent boards were associated with the more timely remediation of material weaknesses. In related studies, Mansor *et al.*, (2013), and Saleh *et al.* (2007) reported a negative relationship between EM and the percentage of independent members on the AC of Malaysian companies. In addition, Yunos (2011) revealed a significant negative relationship between AC independence and DA. While, Ahmad Zaluki and Wan Hussin (2010) showed a positive association between the accuracy of the management's earnings forecasts and independent members on ACs in the same context. However, Abdul Rahman and Ali (2006), Abdullah, et al. (2014), Ismail *et al.* (2010), Salleh and Haat (2014), Yusof (2010) and Petra (2007) provided evidence that there is no significant association between the independence of the AC and EQ.

2.10.2.3 Audit Committee's Financial Expertise

AC members with financial expertise is an important characteristic to help them to understand accounting numbers and monitor the financial reporting process to enhance the financial reporting quality. The Revised Code on Corporate Governance in Malaysia (MCCG, 2007) required all members of audit committees to be financially literate and at least one should be a member of a professional accounting association. AC members who are experts in finance are crucial as they can support auditors (DeZoort *et al*., 2002; DeZoort & Salterio, 2001), the financial statement's credibility (Burrowes & Hendricks, 2005), and the reported earnings high quality

(Baxter & Cotter, 2009; Badolato, Donelson & Ege, 2014; He & Yang, 2014; Sharma and Kuang, 2014; Saleh *et al.*, 2007; Soliman, & Ragab, 2014; Yusof, 2010). Hillman *et al.* (2009) explained that the resource dependence theory posits that directors' role is not only reducing uncertainty, they provide also advice in a variety of strategic areas and valuable expertise.

In order to tackle the issue of ACs oversight, Beasley, Carcello, Hermanson, and Neal (2009) recommended that its members should be knowledgeable concerning accounting concepts and the auditing process in order to improve their understanding of the process of financial reporting. DeZoort *et al.* (2002) added to this by stating that the primary role of the AC includes the protection of shareholders, and to realize its diligent oversight, it is important that the AC selects its members properly and that only qualified members should be selected, and the right authority and resources should be used. The empirical studies evidenced that financial expertise is key for the AC to discharge its responsibilities in an efficient manner. In the context of the US, Xie *et al.* (2003), Bedard and Johnstone (2004), Agrawal and Chadha (2005), and Marra, Mazzola and Prencipe (2011) revealed a negative association between EM and the percentage of the financial expert members on the AC.

In another related study, Goh (2009) investigated the association between the effectiveness of the AC and the timelier remediation of material weaknesses. It was found that financial expertise positively related to the remediation of material weaknesses. Meanwhile, Hoitash and Hoitash (2009), Badolato *et al.* (2014), He and Yang (2014), Sharma and Kuang (2014), and Soliman and Ragab (2014) reported that the percentage of financial expert members on the AC is positively associated

with the EQ and financial reporting quality. In addition, Zhang *et al.* (2007) contended that firms whose AC members lack financial expertise tended to have internal control problems.

Saleh *et al.* (2007), Shawtari et al. (2015), and Yusof (2010) also revealed that AC financial expertise is related to reduce EM in the context of Malaysia. More evidence from Rahmat, Iskandar & Saleh (2009) reported that AC financial expertise is negatively related to a firm's financial distress status. Thus, this finding supports the MCCG and Bursa Malaysia Listing Requirements that firm should appoint directors who have financial expertise on their ACs. However, Abdullah et al. (2014) found insignificant relationship between AC financial expertise and DA.

2.10.2.4 Audit Committee Chairman former Audit Partner

According to the agency theory, internal monitoring mechanisms are required to reduce the conflict of interests between managers and shareholders, and increasing the quality of monitoring could reduce the asymmetry of information (Jensen & Meckling, 1976). Also, the resource dependence theory proposes that company's directors who have different knowledge and expertise bring important resources to the company, which leads to an increase in the firm's internal monitoring and enhances the financial reporting quality (Hillman & Dalziel, 2003). Likewise, a former audit partner among the AC members provides important expertise to increase the effectiveness of AC internal monitoring because he or she has experience in auditing, internal controls and financial statements (Naiker & Sharma 2009). The study of Naiker and Sharma (2009) examined the relationship between AC members as a former audit partners and internal control deficiencies by using

1,225 firms for 2004 in the US. They found that former audit partners is negatively influencing the AC and internal control deficiencies.

Another study, by Naiker, Sharma and Sharma (2013), examined the association between the former audit firm partner on the AC and its relation to non-audit services procured from the external auditor. They found that a former audit firm partner on the AC was significantly negative with non-audit services. On the other hand, Menon and Williams (2004) investigated the relationship between former audit partner firms and abnormal accruals by 840 former audit partner firms and 10,735 non-former audit partner firms in the US for 1998 and 1999. They found that firms having a former audit partner as an officer or director is associated with larger accruals suggesting a potential threat to audit independence.

In Malaysia, Yusof (2010) examined the relationship between AC members who were formerly senior audit managers/partners and DA in a sample of 122 firms on the Malaysian Exchange of Securities Dealing & Automated Quotation (MESDAQ) for 2007. In addition, he found formerly senior audit managers/partners associated with larger DA. Additionally, a study in Malaysia by Radzi *et al*. (2011) examined the association between former senior auditors as company directors and EM using a sample of 113 MESDAQ firms in 2006; they reported no relationship between directors who were formerly senior auditors and EM.

The previous studies showed mixed results between developed and developing countries concerning the issue of audit partner, thus, further investigation is needed on this issue. Therefore, this study will examine the AC chairman former audit

partner as a new AC monitoring characteristic and its impact on EQ among Malaysian listed companies.

2.10.2.5 Audit Committee Meeting

With regards to the AC, several studies used frequency of meetings of ACs as a measure of AC effectiveness (Goh, 2009; Xie *et al*., 2003). Frequent meetings indicate higher effectiveness while a lower frequency of meetings indicates lower effectiveness (Zaman, Hudaib & Haniffa, 2011). The findings of Collier and Gregory (1996) indicated that the existence of the executive members on the committee is negatively related to the meeting frequency. Similarly, McMullen and Raghunandam (1996) contended that firms with financial issues had frequent meetings with the AC, whereas Kalbers and Fogarty (1993) showed that meeting frequency is linked to the effectiveness of the AC. The revised Malaysian Code on Corporate Governance (MCCG, 2007) mandated that four meetings should be held annually for AC effectiveness. According to Saleh *et al.* (2007), in order to achieve its tasks, the AC should be independent, active and the committee should conduct frequent meetings. Goh (2009) revealed that AC meeting frequency relates positively with timelier remediation of material weaknesses.

Prior studies reported clear results on the significance of meeting frequency. Among them, Xie *et al.* (2003) in the US, Garcia *et al.* (2010) in Spain, and Gonzalez and Garcra-Meca (2014) in Latin America reported the frequency of AC meeting association with lower EM (high EQ). On the other hand, Katmon & Al Farooque, (2015) found AC meeting is related to high DA (low EQ). However, the studies of Davidson *et al.* (2005), and Baxter and Cotter (2009) in Australia, and Soliman &

Ragab (2014) in Egypt reported an insignificant association between AC meeting and EQ.

In Malaysia, Saleh *et al.* (2007) revealed a negative association between EM and AC with accounting knowledge and meeting frequency. Also, Yusof (2010) reported that the frequency of audit meetings had a negative relationship with DA in a sample of Malaysian companies listed on MESDAQ. The study by Salleh and Haat (2014) using a sample of 280 listed firms on Bursa Malaysia in 2005, 2006, 2008 and 2009, found a positive association between the frequency of AC meetings and EQ. Similar results found by Shawtari et al. (2015). However, Abdul Rahman and Ali (2006), Abdullah et al. (2014) and Mohamad *et al.* (2012), found an insignificant association between the frequency of AC meetings and EQ in Malaysian firms.

It is evident from the above discussion that the ability of AC effectiveness to enhance the financial reporting quality hinges on their independence, size, knowledge of accounting concepts, auditing process and meeting frequency. Therefore, by examining the AC characteristics separately, past studies provided inconsistent results. The narrow focus and deletion of some variables characterize prior studies and provide two motivations for the present study. First, to include and examine the relationship between these five characteristics separately (independence, size, meetings, financial expertise and chairman audit partner) and EQ. Second, to examine the association between the effectiveness of these five characteristics (score) and EQ among companies listed on the Malaysian Main Market.

2.10.3 Internal Audit Function

The Institute of Internal Auditors (IIA) (1999) defined the internal audit function (IAF) as an independent, objective assurance and consulting group created to provide value and enhance the accomplishment of the organization's objectives by facilitating a systematic, disciplined method to evaluate and improve the effectiveness of risk management, control and the process of governance. In the past few years, the IAF has become a crucial mechanism in corporate governance, as evidenced by various studies (Adiguzel 2013; Al-Shetwi *et al*., 2011; Garcia *et al*. 2012; Haron *et al*., 2010; Johel *et al*., 2013; Mansor *et al*., 2013; Mohamed, Subramaniam, Yusoff & Fadzilah 2012). The revised Malaysian Code on Corporate Governance (MCCG, 2007) mandated that the firm's BOD should set up an IAF, which is directly accountable to the AC (corporate governance Principle 6 – Recognise and manage risks, Recommendation 6.2). Therefore, the revised code declares that the responsibilities of the IAF is to monitor the processes of the financial statement and review all financial transactions, the effectiveness of the risk management, and the internal control to ensure the financial reporting integrity. The year 2009 is the first full year that listed firms had to disclose the amount of investment in the IAF.

Consistent with the agency theory, an increase in the internal control system could lead to an increase in the monitoring process of the company to reinforce and increase the financial information outcomes (Jensen & Meckling, 1976). This, in turn, enhances the financial reporting quality (Ballesta & Garcia-Meca, 2005).

The importance of the IAF is dependent upon whether firms with an IAF have high corporate governance effectiveness (Al-Shetwi *et al.*, 2011; Raghunandan Rama & Read 2001; Scarbrough Rama & Raghunandan 1998), as well as whether good monitoring and coordination would lead to enhanced corporate governance, disclosure and financial reporting quality (Garcia *et al.*, 2010; Goh 2009; Goodwin-Stewart & Kent 2006; Zhang *et al.*, 2007), and mitigate EM (high EQ) (Adiguzel 2013; Mansor *et al.*, 2013; Prawitt *et al.*, 2009).

Even though some studies focus on the IAF, only a few studies investigated the association between the IAF and financial reporting quality in Malaysia, such as a study by Haron, Jeyaraman and Chye (2010) who found a significant positive association between internal audit control and disclosure. Mohamed *et al*. (2012) found a negative association between the competency aspects of internal audit (internal audit existence, internal audit staff information technology and computer skills, training hours, internal audit staff certification, and internal audit staff experience in auditing in accounting) and audit fees. Wan-Hussin and Bamahroes (2013) found a negative association between the investment in the IAF and audit delay, and that the in-house IAF has a significantly lower audit delay than their counterparts that out-sourced the IAF. In addition, they did not find any significant association between the IAF sourcing arrangements and audit delay. However, Johl *et al.* (2013) found an unexpected result that the internal audit quality (experience, organisational independence, quality control assurance, financial focus activities and investment in) increased the DA (low EQ).

2.10.3.1 Investment in Internal Audit Function

Carcello *et al*., (2005) mentioned that the financial reporting problems reflect greater financial reporting risk or complexity and thus require internal monitoring. The significance of the IAF as an important resource lies in the internal auditors' capabilities like technical ability, broad governance outlook and communication skills (Gramling & Hermanson, 2006). In this regard, the Institute of Internal Auditors Attribute Standards mandates that internal auditors should be knowledgeable, skilful and possess the required competencies to carry out their responsibilities in an effective manner (IIA, 2008). All these highlight the need for investment in the IAF.

Investment in the function of the internal audit indicates that more competent personnel in the internal audit are assisting managers to set up effective controls over financial reporting and mitigate control issues (Lin *et al*., 2011). Added to this, Ge and McVay (2005) contended that ineffective internal control is often attributed to the lack of resource commitment to accounting controls. Thus, greater investment in internal auditing should be made when the company faces significant risks and when the company has the resources to pay for more extensive internal auditing. In such a case, the company would have a need for internal audit monitoring, and would have the financial resources available to invest in such monitoring (Carcello *et al.*, 2005).

Research in the area of investment in IAFs is very limited. For example, some studies are linked to the determinants of the level of investment in the IAFs, as they study the factors related to the extent of investment in the IAFs. In particular, Barua *et al*. (2010) stated that investment in the functions of internal audit was adversely

related to the existence of auditing experts on the committee as well as on the average tenure of the committee members, but positively related to the meeting frequency among the members, a variable that is used as a proxy for committee effectiveness. Similarly, Carcello *et al.* (2005) presented that internal audit budgets, both the in-house portion and outsourced portion, are positively related to the size of the company, leverage, intensity of inventory, operating cash flows, and type of industry. They also revealed that the internal audit budgets reviewed by the AC are greater.

In contrast, some studies examined the effect of investment in IAFs on the financial reporting process. For example, Prawitt *et al.* (2009) argued that firms with invest more in its IAF are able to monitor more to detect and deter material misstatements. This means that firms would have more resources, which enable the internal audit department to hire and retain more competent personnel. They did not test the direct influence of investment in IAFs by itself. Instead, they used the internal auditing cost deflated on total assets by the company relative to the internal auditing cost for the industry as one of the six composite measures of IAFs quality, and found that the overall composite measure of IAFs quality increased the level of EQ. Lin *et al.* (2011) used survey data from the Institute of Internal Auditors controls access to the Global Auditing Information Network (GAIN) to test the amount invested in the IAF and the likelihood that the firm discloses material weaknesses in internal controls over financial reporting. They found an insignificant association between the disclosure of material weaknesses and the IAF cost. In addition, they did not find a relationship concerning how investment in the IAF would affect internal control and enhance the quality of financial reporting, and thus increase the likelihood of EQ. In

relation to Malaysian firms, a study by Johl e*t al.* (2013) using 620 firms listed on the Main Market in 2010, found that investment in the IAF decreased DA (high EQ).

The above discussion leads to the conclusion that investment in the IAF seems to have more effective monitoring activities and influence on the quality of earnings, which, in turn, enhances the quality of financial reporting. Despite the importance of IAFs in internal control over financial reporting a few studies examined the relationship between the existence of the IAF and EQ (Prawitt *et al.*, 2009; Garcia *et al.*, 2010; Al-Shetwi *et al.*, 2011; Adiguzel 2013; Johl *et al.*, 2013; Mansor *et al.*, 2013). Only one study in Malaysia, by Johl *et al.* (2013), empirically investigated the investment in IAF in relation to EQ.

2.10.3.2 Internal Audit Function Sourcing Arrangements

The IAF can be undertaken in-house by the internal audit department in the company or outsourced to other professional companies. Outsourced internal audit refers to the internal audit services that are undertaken by independent accounting firms (Carcello, Hermanson & Raghunandan 2005; Desai *et al.*, 2011). According to Bursa Malaysia's Corporate Governance Guide (2009), listed companies are required to disclose whether their IAF is performed in-house or is out-sourced (Chapter 9 Appendix 9C Part A, Para 30). Despite various internal audit sourcing arrangements, recent guidance from the Institute of Internal Auditors (IIA) does not recommend any single sourcing arrangement as being preferable to the others (IIA, 2009).

The outsourcing of internal audit activities has become common among firms (Caplan & Kirschenheiter, 2000). However, the sourcing arrangements of IAFs, in

light of business knowledge, costs and independence holds several pros and cons (Desai *et al*., 2011). Therefore, whether to maintain IAF from within the company or outsourcing it to a private firm is still debatable. Maintaining the IAF in-house could lead to higher internal monitoring and control over the audit processes and for higher protection of real information, an in-depth understanding of the business processes and the related risks to outsiders and non-employees, and it opens up opportunities for the in-house employees to learn (Vecchio & Clinton, 2003; Rittenberg, 1999). This is why some researchers advocate in-house providers of internal audit for their in-depth knowledge, loyalty, and role in handling crisis, particularly those involving fraud, as evidenced by Spekle, Elten and Kruis (2007).

On the other hand, advocates of the outsourced IAF argue that in-house internal auditors are less independent than outsourced internal auditors, as it is difficult for an employee to be truly independent from the management (James, 2003). Along with this argument, Ahlawat and Lowe (2004) proposed that an in-house IAF is likely to be less objective than an outsourced IAF and those outsourced internal auditors are less likely to succumb to management pressure than in-house internal auditors who are not independent from company management. Similarly, external auditors consider internal auditors to be more objective and independent when the internal auditors are not employees of the company (Gramling & Hermanson 2006).

Outsourcing the IAF to an external independent firm also provides the following benefits: (1) access to specialized knowledge of an independent firm that specializes in providing audit services; (2) greater geographic coverage of internal audit activities; (3) greater flexibility in the planning of internal audit activities because the company does not have to hire new employees when a temporary need for expert

knowledge arises; and (4) relatively lower probability that outside internal audit personnel would exert pressure on the management (Vecchio & Clinton, 2003).

Caplan and Kirschenheiter, (2000) argued that the expertise, flexibility, and cost-effectiveness of the service rendered might enhanced by outsourced IAF. Additionally, outsourced internal auditors are convinced that they face higher legal liability compared to their in-house counterparts, which may impact on their incentives concerning audit issues that influence the external financial reporting quality (Ahlawat & Lowe, 2004).

Limited studies have investigated in the relationship between the sourcing arrangements of the IAF and the quality of financial reporting. Wan-Hussin and Bamahroes (2013) studied the relationship between the sourcing arrangements and audit delay in 2009 using a sample of publicly traded firms in Malaysia; they found a significant negative relationship between the IAF sourcing arrangements (in-house) and audit delay. Glover *et al*. (2008), using a survey among 127 external auditors at training sessions for one BIG4 accounting firm, found a significant positive relationship between sourcing arrangements and external auditors reliance decision. Carey, Subramaniam, and Ching (2006) found that 45 per cent of the 99 respondents outsourced some or all of their internal audit activities. This is consistent with the findings reported by Prawitt, *et al*., (2009), which examined the IAF quality with EM relationship and found that the IAF quality is negatively related with EM. They also revealed that the IAF quality was related to the heightened EQ level.

In a similar vein, Prawitt, Sharp, and Wood (2012) investigated whether or not firms outsourcing their internal audit work pre-SOX had a greater risk of misleading or

erroneous external financial reporting (accounting risk). Based on their findings, firms that outsource some portion of their IAF had lower accounting risk compared to those that outsourced to other BIG4 service providers, those that outsourced to other non- BIG4, those that outsourced to third-party providers and those that kept their IAF completely in-house. Their findings revealed that companies that outsourced to BIG4 service providers other than their external auditor, or those that outsourced to non- BIG4 reported significantly greater accounting risks compared to companies that kept their IAF completely in-house.

The above finding supports Caplan and Kirschenheiter's (2000) study that investigated the incentives for outsourcing the IAF to a public accounting firm. They revealed that the outsourced IAF is of much higher quality compared to the one in-house. On the other hand, Kinney, Palmrose and Scholz (2004) investigated the internal audit service, external auditor and financial restatements relationships and found no significant relationship between outsourcing the internal audit work to an external auditor and restatements.

Moreover, in Malaysia, Mansor *et al.* (2013), using a sample of 264 public listed companies in 2008, found sourcing arrangements (in-house) related to a decrease in DA (high EQ). While, Johl *et al*. (2013) examined the relationship between the sourcing arrangements and abnormal accruals in a sample of 620 firms listed on the Main Market for 2009 and 2010. The findings revealed an insignificant relationship between the sourcing arrangements and abnormal accruals, irrespective of whether or not the firms outsourced their internal audit activities.

This led to the conclusion that outsourcing seems to provide more effective monitoring activities and influences the financial reporting process oversight, which, in turn, increases the EQ. However, only a few studies in Malaysia by Mansor *et al.* (2013) and Johl *et al.* (2013) have been conducted that shed light on the issue by relating the influence of internal audit sourcing arrangements with EQ. This provides the motivation for the empirical examination in the present research.

2.10.4 Moderating Effect of Audit Committee

The revised Malaysian Code on Corporate Governance (MCCG, 2007) indicated that the BOD in listed companies should establish an IAF to review the financial process and enhance internal control. The IAF reports are submitted to the AC and the head of the IAF has regular meetings with the AC. In addition, the AC is responsible to coordinate and monitor internal auditors. The head of the IAF is responsible for providing information concerning the AC progress. Several authors claimed that an effective relationship between the AC and internal auditors is needed for effective internal control mechanisms and for the improvement of the quality of financial statement (Al-Shetwi *et al.*, 2011; Davidson *et al.*, 2005; Doyle, Ge & McVay, 2007; Wan-Hussin & Bamahroes, 2013; Zhang *et al.*, 2007). Meanwhile, several researchers, such as Strawser *et al*. (1995) and Abbott, Park, and Parker (2000), contended that the IAF's quality was enhancing when the internal audit department was made accountable to the AC. Stated differently, a robust working relationship between the AC and internal auditors could work towards the effective fulfilment of duties.

Other researchers attempted to establish a link between AC members and the IAF. Specifically, the survey by Raghunandan *et al.* (2001), involving 114 chief internal auditors, showed that an AC consisting of independent directors, with one of them possessing accounting knowledge, is more likely to meet with the head of the internal audit department. In addition, in Scarbrough *et al.'s* (1998) Canadian study involving 72 heads of internal auditors, ACs consisting of only independent directors had a tendency to conduct meetings with internal auditors and review their tasks. Additionally, the Deloitte report (ACs – a better practice guide, 2004) stipulated that the report of the internal audit department should be directly submitted to the AC, and, the head of the internal audit department frequently meet with it. In a related study, DeZoort and Salterio (2001) also showed, in their study involving 18 heads of internal audit departments, that effective communication between internal auditors and ACs could lead to the improvement of the quality of corporate governance.

According to Zain and Subramaniam (2007), the lack of informal interactions and private meetings between the IAF head, and the head of the AC, leads to the requirement of transparent reporting mechanisms. Moreover, the AC is considered with great respect due to their authority of leadership and oversight over the decisions taken by management. The above findings show the significance of AC leadership in reinforcing the function of the internal audit.

The empirical evidence of the possibility that the AC moderates the relationship between audit quality and EQ was reported by Sharma *et al.* (2011), who examined the AC effectiveness as a moderating effect between client importance and EM among 112 firms in New Zealand during the period of 2004 and 2005. They reported

that the AC best practice[3] moderates the relationship between important clients and EM. In addition, another study by Alves (2013), which used a sample of 33 listed Portuguese firms from 2003 to 2009, found that the interaction of AC existence and external auditor (Big 4) decreased EM, which indicates that ACs moderate the relationship between external audit and EQ.

2.11 Chapter Summary

The agency and resource dependency theories argue that an increase in board of directors' effectiveness and AC effectiveness may reduce the asymmetry of information, and the agency conflicts between managers and stockholders, and majority and minority shareholders. Initiated by the agency and resource dependence theories, several authors have examined the effect of corporate governance upon the economic activities and financial reporting of the firms. Added to this, the BOD, AC and IAF are crucial internal governance mechanisms to monitor and control the self-serving behaviour of management and reduce the asymmetry of information, and the agency conflict between stakeholders and managers, and the majority and minority shareholders.

The literature review highlights issues related to financial reporting and corporate governance in Malaysia. In this chapter, the Malaysian Code on Corporate Governance 2001, revised in 2007 and 2012, in relation to the internal monitoring mechanisms (BOD, AC and IAF) was discussed. Details of the empirical evidence on the relationship between the internal monitoring mechanisms in relation to EQ

3-Value 1 is given if audit committee: (1) all non-executive directors, (2) the majority independent directors, (3) has an accounting expert, and (4) the chairman is an independent director and not the chairman of the board of directors, and 0 otherwise.

were reviewed. In addition, Tables 2.2, 2.3 and 2.4 presented a number of empirical studies, which examined the relationship between internal monitoring mechanisms and EQ (DA as a proxy) in developed countries, developing countries and Malaysia, respectively.

Table 2.2
Summary of Some Empirical Studies on the Monitoring Mechanisms and Earnings Quality in Developed Countries

Author(s), Country	**Dependent Variable Measurements**	**Internal Monitoring Mechanisms Variables**	**Results**
Klein (2002), U.S.	DA, (Jones 1991 model).	Board independence, AC independence, and outside directors experience	(-) sig
Xie *et al.* (2003), U.S.	DA based on the method in Teoh *et al.* (1998) and Jones (1991).	Board independent, meetings, size, and financial expertise	(-) sig
		AC independence and AC size	(-) n/sig
		AC meeting and AC financial expertise	(-) sig
Davidson, *et al.* (2005), Australian	DA, m-Jones by Dechow *et al.* (1995)	Independency of board and AC	(-) sig
		AC meeting	(+) n/sig
		AC size, Big5 auditors and IAF	(-) n/sig
Baxter and Cotter (2009), Australia	Accrual quality Dechow and Dichev (2002)	AC independence	(+) n/sig
		AC meeting	(+) n/sig
		AC financial expertise	(-) sig
		AC size	(-) n/sig
Prawitt *et al.* (2009), U.S.	DA, m-Jones model by Kothari *et al.*(2005)	IAF quality (experience, certification, and training)	(-) sig
Hunton *et al.* (2011), U.S.	M-Jones model by Dechow *et al.* (1995), by Kothari *et al*. (2005) and Dechow and Dichev (2002) accrual quality model	Board-score (board size, percent age of insiders, the value CEO-not-chairman and CEO-not-only-executive), board-independent, board size, AC-score (size, meetings, and expertise)	(-) sig
Sharma *et al.* (2011), New Zealand	DA, m-Jones model by Kothari *et al*.(2005)	AC as a moderating effect between client importance and EM	AC is a moderator
Alves (2013), Portugal	DA, m-Jones by Dechow *et al*. (1995)	Existence of AC	(+) sig
		External audit (Big4 audit firms)	(+) sig
		Interaction between AC and Big4	(-) sig

Table 2.2 (continued)

Author(s), Country	Dependent Variable Measurements	Internal Monitoring Mechanisms Variables	Results
Badolato *et al*. (2014), BoardEx data	DA, m-Jones by Dechow *et al.* (1995)	AC expertise	(-) sig
He and Yang (2014), S&P 1500 firms	Discretionary current accruals, m-Jones Xie *et al.* (2003)	AC financial expertise	(-) sig
Gonzalez and Garcra-Meca (2014), Latin America	DA, m-Jones by Dechow *et al.* (1995)	Board size	(+) sig
		Board independence and board meetings	(-) sig
Sharma and Kuang (2014), New Zealand	DA, m-Jones model by Kothari *et al.*(2005)	AC independence	(-) sig
		AC financial expertise	(-) sig

Note: Sig = Significant, n/sig = not significant.

Table 2.3
Summary of Some Empirical Studies on the Monitoring Mechanisms and Earnings Quality in Developing Countries

Author(s), Country	Dependent Variable Measurements	Internal Monitoring Mechanisms Variables	Results
Chen *et al.* (2007), Taiwan	DA, m-Jones by Kothari *et al*. (2005)	Board independence and financial expertise	(-) sig
Siregar and Utama (2008), Indonesia	DA, m-Jones by Kasznik (1999)	Board independence	(-) n/sig
Garcia *et al*. (2010), Spain	Discretional accruals measured with Jones´ model (1991)	AC independence	(+) n/sig
		AC size	(-) sig
		AC meetings	(-) sig
		IAF	(-) sig
Al-Shetwi *et al.* (2011), Saudi Arabia	Discretionary accrual, Jones model 1991	IAF	(-) n/sig
Adiguzel (2013), Turkey	DA, m-Jones by Kothari *et al*. (2005)	Board independence, board meetings , AC independence and AC size	(+) n/sig
		IAF	(-) sig

Table 2.3 (continued)

Author(s), Country	Dependent Variable Measurements	Internal Monitoring Mechanisms Variables	Results
Ye (2014), China	DA, m-Jones model by Dechow *et al.* (1995)	Board size	(-) sig
		Board independence	(+) n/sig
		Audit quality (big 10)	(-) sig
Uwuigbe, *et al.* (2014). Nigeria	DA, m-Jones model by Dechow *et al*. (1995)	Board size	(-) sig
		Board independence	(-) sig
Soliman and Ragab, (2014), Egypt	DA, m-Jones model by Dechow *et al.* (1995)	AC size	(+) n/sig
		AC independence	(+) sig
		AC financial expertise	(-) sig
		AC meeting	(+) n/sig
		Audit quality (big 4)	(-) sig

Note: Sig = Significant, n/sig = not significant.

Table 2.4
Summary of Some Empirical Studies on the Monitoring Mechanisms and Earnings Quality in Malaysia

Author(s), Country	Dependent Variable Measurements	Internal Monitoring Mechanisms Variables	Results
Abdullah and Nasir (2004)	DA, m-Jones model working capital accruals by Xie *et al.* (2003) and Peasnell *et al*. (2001).	Board independence;	(-) n/sig
		AC independence	(-) n/sig
Saleh *et al.* (2005)	DA, Jones model (1991)	Board independence	(+) n/sig
		Board size	(-) n/sig
Abdul Rahman and Ali, (2006)	DA, m-Jones model working capital accruals by Xie *et al*. (2003) and Peasnell *et al*. (2001).	Board independence	(-) n/sig
		Board size	(+) sig
		Ac independence	(+) n/sig
		Ac meeting	(-) n/sig
Saleh, *et al.* (2007)	DA, Jones model (1991)	AC independence, financial expertise, meetings, effectiveness	(-) sig
Hashim and Devi (2007)	EQ (accrual quality model) Francis *et al*. (2005) extend the Dechow and Dichev (2002)	Board independence	(+) n/Sig

Table 2.4 (continued)

Author(s), Country	Dependent Variable Measurements	Internal Monitoring Mechanisms Variables	Results
Ismail, *et al*. (2010)	DA, Jones model (1991) and m-Jones by Kasznik (1999)	Board size and AC size	(-) sig
		independency of board and AC	(-) n/sig
Yusof (2010)	DA, m-Jones model by Dechow *et al*. (1995)	AC independent	(+) sig
		AC financial expertise	(-) sig
		AC meeting	(-) sig
		AC former senior auditor	(+) sig
Radzi *et al.* (2010)	DA, Jones model (1991)	size of audit firm	(-) n/sig
		Internal audit establishment	(-) n/sig
		Directors' former senior auditor	(-) n/sig
Mohamad *et al.*(2012)	DA, m-Jones model by Dechow *et al*. (1995).	1n 2003: board independence	(+) n/sig
		board size and board meetings	(-) n/sig
		AC meetings and Ac financial expertise	(+) n/sig
		In 2006: board independence	(-) n/sig
		board size , board meetings	(-) n/sig
		AC meetings and	(+) n/ sig
		Ac financial expertise	(+) sig
Buniamin *et al.* (2012)	Absolute DA, m-Jones model by Dechow *et al.* (1995).	Board size	(+) n/ sig
		Board independence	(-) n/ sig
		Board competency (expertise)	(-) n/ sig
Johl *et al.*(2013)	Absolute DA, m-Jones model by Kothari *et al.* (2005)	IAF quality (experience, organisational independence, quality control assurance, financial focus activities and investment in)	(+) sig
		Sourcing arrangement IAF (outsource)	(+) n/sig
Mansor *et al.* (2013).	DA, m-Jones model (Becker *et al.*, 1998; Davidson *et al.*, 2005)	Board independence and board meetings	(-) sig
		Board size	(+) sig
		AC independence and AC size	(-) sig
		Outsource IAF (in-house)	(-) sig
Saleh *et al.* (2013)	Dechow and Dichev's (2002)	AC independence	(+) sig

Table 2.4 (continued)

Author(s), Country	Dependent Variable Measurements	Internal Monitoring Mechanisms Variables	Results
Salleh and Haat, (2014)	DA, m-Jones model by Dechow *et al.* (1995).	AC size, AC audit knowledge and board size	(+) n/sig
		AC financial knowledge	(-) n/sig
		AC meetings and AC independence	(-) sig

Note: Sig = Significant, n/sig = not significant.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

Chapter three explains how the present study is carried out. Specifically, this chapter describes the research design and data collection. In addition, the development of the hypotheses and research framework are included in this chapter, which also outlines the measurements and techniques of data analysis used in this study. Moreover, this chapter explains the method used to achieve the objectives of the study. This chapter is organized as follows: the next section presents and discusses the research framework of the study. This is followed by the development of the hypotheses. The next section outlines the research method and design including the measurement of variables and the techniques of data analysis. The summary of this chapter is presented in the final section.

3.2 Theoretical Framework

According to the previous studies in chapter two and the Malaysian Code on Corporate Governance (MCCG 2000) and Revised Malaysian Code on Corporate Governance (MCCG 2007), it is important for a firm to depend on an integrated system of controls to minimize its risks and bring performance improvement. First, the identification of the role of the board of directors (BOD) and audit committees (AC) is required. Second, a system of internal controls has to be established, which entails the establishment of the internal audit department to enhance the internal monitoring. Finally, the role of the internal monitoring mechanisms should be identified to achieve the goal of increasing the integrity, reliability and credibility of the reported earnings.

The theoretical framework of the study is based on two theories – agency theory and resource dependence theory. The agency theory postulates that monitoring mechanisms have to be aligned with the interests of managers as well as shareholders in order to minimize the conflict of interests and any potential opportunistic behaviour that may arise (Jensen & Meckling, 1976). Various monitoring mechanisms, like the internal corporate governance mechanisms impact the financial reporting process and the information reliability, which, in turn, influences earnings quality (EQ). In addition, an increase in the monitoring quality could lead to an increase in the reported EQ and the reduction of information uncertainty stemming from the accounting estimates subjectivities and the owner-management conflict of interest (Goh, 2009).

The agency theory and resource dependence theory focuses on the BOD, AC and internal audit function (IAF) with respect as a good resources to ensure the internal monitoring effectiveness in order to reduce the agency problems resulting from the owners as principals being separated from managers as agents in modern corporations. One of the fundamental agency theory mechanisms proposes addressing the agency problem of internal monitoring. In addition, the agency theory and resource dependence theory have been used in existing academic literature to explain how the mechanisms of corporate governance work in enhancing EQ in Malaysia (Abdullah, 1999; Hashim & Devi, 2007; Ismail *et al*., 2010).

Thus, the present study investigates the impact of internal governance monitoring mechanisms on the EQ with discretionary accruals (DA) as a proxy for EQ. The study's framework is consistent with its objectives, as presented in Figure 3.1. The

diagram depicts the entire study variables based on the agency theory and resource dependence theory, and the relation of the internal governance monitoring mechanisms (independent variables) with EQ. These include the effectiveness of the board of directors, that is, size, independence, financial expertise and meetings, and the score of these characteristics. Then, AC effectiveness, that is, size, independence, financial expertise, chairman audit partner and meetings, and the score of these characteristics. The attempt of the current study is to examine the monitoring role of these primary agents of corporate governance mechanisms in reducing agency costs and enhancing the EQ (dependent variable).

Based on previous studies, the relationship between the IAF and financial reporting quality is examined from two perspectives, namely, investment in the IAF and internal audit sourcing arrangements. The researcher builds the association between the IAF and EQ. Therefore, the elements of investment in the internal audit and sourcing arrangements of IAF are included in this research conceptual framework under the internal audit function.

Likewise, there has been no research (to the best of the researcher's knowledge) that directly compared the relative effectiveness of in-house versus outsourcing and investment in the IAF in the EQ in Malaysian firms except two studies done by Johl *et al.* (2013) who examined the relationship between IAF and DA, and Mansor *et al.* (2013) who examined the relationship between sourcing arrangements and DA. In this respect, this study seeks to extend the work of Prawitt *et al.* (2009) and (2012), in an Asian country's economy, by investigating whether investment in and sourcing arrangements functions of internal auditor have an effect on the EQ. Hence, further

empirical investigation becomes necessary. Moreover, this is the first study (to the best of the researcher's knowledge) to examine the moderating effect of AC (independence, size, financial expertise, chairman audit partner, meeting, and the score of these characteristics) between the IAF (cost and sourcing arrangement) and EQ.

The controlled variables include the firm size, leverage, firm profitability, loss, sales growth, audit quality and ownership concentration. These variables have been included in the previous studies because of their effects on EQ (Abdullah, 1999; Hunton *et al*., 2011; Ismail *et al*., 2010; Klein, 2002). High ownership concentration affects board of directors effectiveness, especially board independence. In Canada, where there is great concentration of ownership structure and where large blockholders control the public traded firms, Park and Shin (2004) reported no evidence of the EM relationship with board independence. Another study by Abdullah and Nasir (2004), and Abdul Rahman and Ali (2006) provided evidence that board independence is not significantly related to earnings management (EM) in the context of Malaysia, because there is a high ownership concentration in Malaysian firms, based on the above statement this study will include ownership concentration as a control variable.

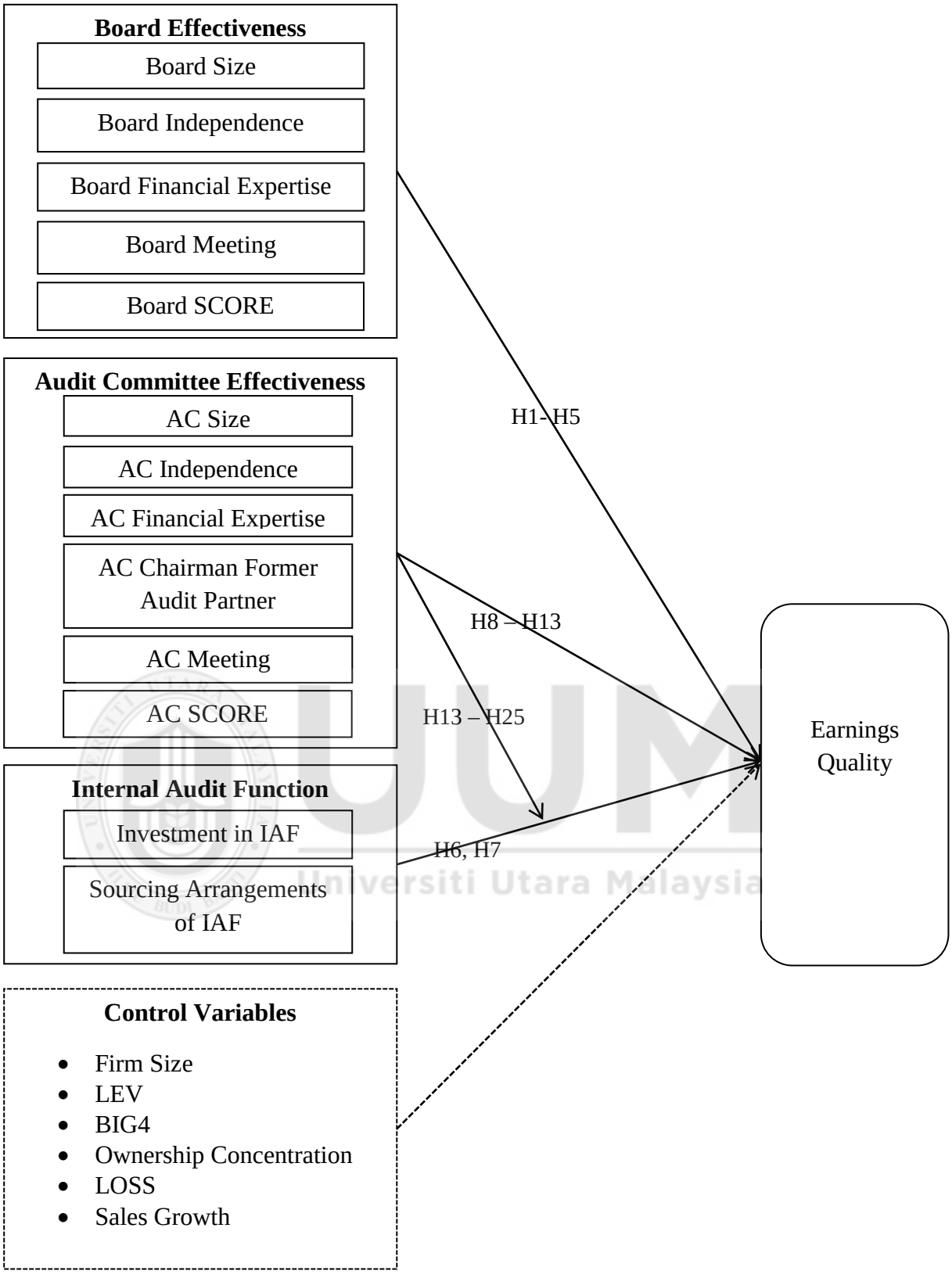

Figure 3.1: *Research Framework*

3.3 Hypothesis Development

In the literature, several determinants have been reported to explain the impact of monitoring mechanisms on the earnings quality (EQ). Two theories, the agency theory and resource dependence theory have also provided an explanation of the role of corporate governance in increasing financial reporting quality through the internal monitoring mechanisms. The hypothesis development of the study is based on the agency theory and the resource dependence theory.

3.3.1 Board of Directors' Effectiveness

Goh (2009) contended that board size, board independence, and frequency of board meetings are the main factors that reflect the effectiveness of the board. In addition, Chobpichien, Haron and Ibrahim (2008) and Johl *et al.* (2013) claimed that board size, independence, financial expertise and frequency of board meetings are the key elements that reflect board quality and that encourage managers to report more information to external stakeholders.

3.3.1.1 Board Size and Earnings Quality

With regards to board size, in the literature pertaining to organizational management, it is primarily recognized that an increase in the board size has the tendency of limiting the board from exercising its skills and to initiate their strategic activities, this implies that smaller boards may be a more invaluable tool in appropriately controlling executive management while larger boards may only hinder achieving a unanimous decision concerning the issues of importance (Forbes & Milliken, 1999; Jensen, 1993; Judge & Zeithaml, 1992; Lipton & Lorsch, 1992). This hindrance may arise for various reasons; first, larger groups are characterized by problems in

communication and coordination owing to their large number. Second, larger groups have lower levels of motivation and satisfaction as reflected by their lack of participation. Hence, larger boards are less inclined to take part in strategic decision-making (Lipton & Lorsch, 1992).

Additionally, Jensen (1993) attributed inefficiency to larger boards because of the fact that CEOs are able to control the discussions of larger members characterized by a lack of coordination coupled with problems in the company. It has therefore been indicated that small boards may serve as an effective tool in suitably controlling executive management. Similarly, Lipton and Lorsch (1992) recommended 8-9 members of the board and if monitoring needs to be increased for more benefit, adding more members will offset the costs related to slow decision-making. In a related study, Goodstein, Gautam, and Boeker (1994) claimed that smaller boards with 4-6 members might work more effectively owing to their ability to come up with timely decisions whereas larger boards can monitor the activities of top management. In addition, Lefort and Urzua (2008) reported a positive relationship between small sized boards and the performance of the company and Yermack (1996) noted that firms with smaller boards of less than ten directors have indicated greater performance in comparison to those with bigger boards.

Empirical studies indicate that the association between earnings management (EM) and board size is a significantly negative relationship (Ismail *et al.*, 2010; Razak & Palahuddin, 2014;Uwuigbe *et al.*, 2014; Xie *et al.*, 2003; Ye, 2014), significantly positive relationship (Abdul Rahman & Ali, 2006; Mansor *et al.*, 2013), and insignificant relationship (Buniamin *et al.*, 2012; Gonzalez & Garcra-Meca, 2014;

Katmon & Al Farooque, (2015); Mohamad *et al.*, 2012; Saleh *et al.*, 2005). On the other hand, as suggested by the resource dependence theory, large boards result in better performance of the firm and high EQ. Additionally, some previous studies (Ismail *et al.*, 2010; Klein 2002; Peasnell *et al.*, 2005; Vafeas 2000; Xie *et al.*, 2003; Zahra & Pearce, 1989) argued that larger boards have the capability of monitoring the top management actions, thus increasing the EQ. In addition, they reported that board size is positively related to EQ. This implies that board size affects EQ positively, and, for this reason, the following hypothesis is stated thus:

H_1: There is a significant positive association between board size and earnings quality.

3.3.1.2 Board Independence and Earnings Quality

The agency theory postulates that independent directors are the main corporate monitoring mechanism employed to minimize the agency conflict (Jensen & Meckling, 1976). By monitoring the behaviour and controlling the executive directors' actions, independent directors can curb the agency conflict between owners and managers (Benkraiem, 2009), while, at the same time, a good level of monitoring enables the principals to be aware of the opportunistic behaviour and to hold the agents accountable if they are less motivated to conduct such behaviour.

Abdullah and Nasir (2004), Beasley (1996), Bekiris and Doukakis (2011), and Klein (2002) argued that as the number of independent directors increase on the board the possibility of providing more information to the external users will be enhanced because they reinforce the internal control of a company and offer a thorough monitoring package to a firm in order to minimize the management opportunistic

behaviour and information asymmetry. Given this thorough monitoring environment, managers will find it difficult not to release information that they wish to withhold for their own self-interest, which will increase the level of EQ.

Empirical studies show some evidence of a relationship between board of directors' independence and EQ. For instance, Siagian and Tresnaningsih (2011), Shiri, *et al.* (2012), claimed that if there is a large proportion of independent non-executive directors on the board, the financial reporting would be of high quality. Other studies like Beasley (1996), Dechow *et al.* (1996) and Uzun, Szewczyk, and Varma (2004) asserted that with outside directors having larger representation on the board, there is less tendency for financial statement fraud. In studies related to the outside directors carried out by Chen *et al*. (2007), Davidson *et al.* (2005), Gonzalez & Garcra-Meca (2014), Klein (2002), Peasnell *et al.* (2000), Peasnell *et al.* (2005), Uwuigbe *et al.* (2014), Xie *et al.* (2003), and Alves (2014), was reported that EM has a significant negative association with a larger percentage of independent directors. This is consistent with the contention that independent directors offer more of a monitoring tool for the board to reduce the activities of EM. Moreover, some authors in their studies (Abdul Rahman & Ali, 2006; Park & Shin, 2004) considered the issues related to the absence of adequate skills, expertise, and knowledge on the part of independent directors to understand the details of financial reporting, because, for their board services, they only get the processing knowledge of the financial reporting.

For countries having the features of high ownership structure concentration, inconclusive findings were reported with respect to the board independence

relationships with financial reporting quality. For example, Kao and Chen (2004) in Taiwan, and Jaggi and Leung (2007) in Hong Kong, noted that EM has a significant negative relationship with a larger proportion of outside directors. The results show that by having a higher percentage of outside members represented on the BOD there is thorough monitoring of management to avoid activities associated with EM. Conversely, the empirical results of Park and Shin (2004) showed that, in Canada, where there is a high concentration of ownership structure and where large blockholders control public traded firms, EM relationships could not buttress board independence. In addition, some empirical studies by Siregar and Utama, (2008) in Indonesia, Adiguzel (2013) in Turkey, and Ye (2014) in China reported that there was no association between board independence and EQ. In addition, Mansor *et al*. (2013) and Abdullah, et al. (2014) found a significantly negative association between board independence and EM in Malaysian listed companies.

On the other hand, Shawtari, et al. (2015) found that board independence is positive relation with DA among GLCs in yaer 2005 and 2006. However, Abdullah and Nasir (2004), Abdul Rahman and Ali (2006), Buniamin *et al.* (2012), Hashim and Devi (2007), Mohamad *et al.* (2012), Razak and Palahuddin (2014) and Saleh *et al.* (2005) in the study of Malaysia reported that board independence is not significantly related to EM. However, following the perspective of the agency and resource dependence theory, the following hypothesis is put forward:

H_2: There is a significant positive association between board independence and earnings quality.

3.3.1.3 Board Financial Expertise and Earnings Quality

The advocates of the agency theory claim that a board's main activity is management monitoring whereas the advocates of the resource dependence theory contend that the board's role include the provision of resources (Hillman & Dalziel, 2003; Nicholson & Kiel, 2007; Zahra & Pearce, 1989). Due to the board's role in providing accessibility to information to the executives at the right time, they are considered to perform an important monitoring role (Zahra & Pearce, 1989). As resource providers, boards can provide advice and counsel (Hillman & Dalziel, 2003). According to Daily, Dalton, and Cannella (2003), boards comprising expert members from financial institutions will improve firms' organizational functioning, performance and survival. In addition, Fama and Jensen (1983) contended that outside directors often create reputational effects reflecting their expert decision control.

In the empirical studies conducted by Bedard and Johnstone (2004), Chen *et al.* (2007) Klein (2002), Park and Shin (2004), and Xie *et al*. (2003), a negative association was found between the percentage of financial expertise on the corporate BOD and the possibility of EM, which, in turn, is related to high EQ. In the Malaysian context, Saleh *et al.* (2007) found that board financial expertise has a significant negative association with discretionary accruals (DA) (high EQ). However, Mohamad *et al.* (2012), using a sample of 35 GLCs, failed to find any significant relationship between board financial expertise and DA.[4]

[4] The study used a sample of 35 firms before transformation to Malaysian Government Linked Companies (GLS) and after the transformation.

Based on the findings mentioned above, financial expertise plays a crucial role in determining the effectiveness of board monitoring as members with financial expertise gain better insight into EQ. For this reason, the current study makes the following hypothesis:

H_3: There is a significant positive association between board financial expertise and earnings quality.

3.3.1.4 Frequency of Board Meeting and Earnings Quality

The frequency of board meetings, as well as each board member's behaviour represents the board meeting, which consists of various factors associated with it, such as attentiveness, before meeting preparation, during meeting participation, and after meeting follow-up (Carcello *et al*., 2002). Among these factors, the frequency of board meetings only appears to be observable by the public. On the issue related to the process of financial reporting, Carcello *et al.* (2002) noted that the strength of board activities implies their contribution to the effective oversight functions. Vafeas (1999) stated that due to the advisory role, the time of the board meetings has the potential of enhancing board effectiveness in order for them to carry out their responsibilities to achieve better management and easy accessibility to information, which will contribute to effective monitoring.

According to Vafeas (1999), and Lipton and Lorsch (1992), the effectiveness of the BOD depends on the time, in which case board meetings reflect the activity of the board. Considering it from the agency point of view, it is argued that when adequate diligence is displayed or demonstrated by the board in carrying out its duty, it will improve the whole process of the financial reporting oversight (Carcello *et al.*, 2002).

Xie *et al.* (2003) stated that the higher the frequency of board meetings, the higher will be the time dedicated to issues relating to EM and vice versa. However, Adiguzel (2013), and Mohamad *et al.* (2012) found an insignificant association between board meetings and EQ (DA as a proxy).

Board activity has also been argued to depend on firm size; as the firm becomes larger the firm becomes more complex and requires more time to be devoted to the decision-making process because of the complexity of information in such organizations (Vafeas, 1999). In the studies conducted by Gonzalez & Garcra-Meca (2014), Mansor *et al.* (2013), Sarkar, Sarkar, and Sen (2008), and Xie *et al.* (2003), board meetings are reported to have a negative relationship with the DA, which further relate to EQ positively. As suggested by the agency theory it is expected that DA will decrease as the number of board meetings increases. In a related study by Mohamad *et al.* (2012), board meetings were found to have a positive relationship with EQ. Given the above discussion, the following hypothesis is made:

H_4: There is a significant positive association between the frequency of board meetings and earnings quality.

3.3.1.5 Board Score and Earnings Quality

It is evident that the prior studies that examined the link between corporate governance and EQ made use of the board of directors' (BOD) characteristics to reflect the overall best practice as the impact of the overall corporate mechanisms measurement is more significant compared to the investigative individual impact. Moreover, it has been contended that the optimal combination of the mechanisms may be viewed to better reduce the agency cost and to safeguard the shareholders'

interests because corporate governance effectiveness is achieved in various ways (Johl *et al*., 2013). The importance of corporate governance mechanisms as a bundle of mechanisms protecting shareholder interests was also carried out by Chobpichien *et al*. (2008), and Ward, Brown and Rodriguez (2009). They advised against studying the mechanisms in isolation from each other as they are complementary to each other. Furthermore, Hunton *et al.* (2011), and Johl *et al.* (2013) showed that the higher quality of combination boards is related to higher EQ. On the basis of the above discussions in the literature, the present study postulates that when the characteristics that improve the board effectiveness increase, the EQ level also increases. Thus, based on the argument for board score, this study hypothesizes as follows:

H_5: There is a significant positive association between the score of the board of director's effectiveness and earnings quality.

3.3.2 Internal Audit Function and Earnings Quality

Schipper and Vincent (2003), Dechow *et al*. (2012), and Johl *et al*. (2013) observed that internal control is related to EQ. Additionally, previous studies found a relationship between internal control and EM using different measurements. For example, see Jones (1991) for DA, Dechow and Dichev (2002) for average accruals quality, and Schipper and Vincent (2003) for earnings persistence. In addition, Prawitt *et al.* (2009) reported that the IAF quality is based on the proficiency of IAF and is not dependent on management, but acts as a moderator to the EM level.

Doyle *et al.* (2007) observed that weaknesses in the internal control allow the occurrence of errors in the estimation accrual and influence the financial statements

reported, which leads to lower EQ. Garcia *et al*. (2010) and Adiguzel (2013) found that having an IAF is negatively related to EM. However, Al-Shetwi *et al*. (2011), using a sample of 44 companies on the Saudi stock exchange, failed to find any significance of the existence of IAF and DA (proxy for EQ).

Thus, this study investigates the association between IAF attributes and EQ, using publicly available data in a company annual report. In addition, this study investigates whether the sourcing arrangements of IAF (namely, whether it is out-sourced to a third party internal audit service provider or performed in-house) have any impact on EQ.

3.3.2.1 Investment in the Internal Audit Function and Earnings Quality

Prawitt *et al*. (2009) argued that an IAF that is comparatively efficiently funded should have greater monitoring ability to detect and deter material misstatements, as the greater resources enable the IAF to hire and retain more competent personnel. They found that the overall composite measure of IAF quality reduces the level of EM, which, in turn, increases EQ. Considering it from a wider point of view, the findings suggest that an essential role is performed by the IAF in the quality of financial numbers reported externally. This is certainly an important area that has not been explored, and, thus, is suggested for potential future study.

Furthermore, Lin *et al.* (2011) argued that the IAF duties revolve around internal controls over financial reporting, and it is effective in increasing the IAF quality. In terms of Malaysian studies in the relationship between investment in the IAF and EM, Johl *et al*. (2013) found a significantly negative relationship. Thus, higher

investment in the IAF implies that more competent IAF personnel help management to establish stronger controls over financial reporting. Based on the above discussion, the investment in IAF hypothesis is postulated as follows:

H_6: There is a significant positive association between investment in the internal audit function and earnings quality.

3.3.2.2 Internal Audit Function Sourcing Arrangements and Earnings Quality

There are various pros and cons associated with the sourcing arrangements of the IAF. For instance, more opportunities are presented by in-house internal auditors to the company to discover problems as they are often in daily contact with the company, ferreting out critical facts and issues from employees (Glover *et al.*, 2008). On the other hand, the drawbacks include limited specialized knowledge that is available, and the higher potential of internal auditors to fall under pressure from the management (Desai *et al*., 2011). Meanwhile, outsourcing the IAF provides several advantages like specialized knowledge access and higher objectivity, as such internal auditors are not susceptible to management pressure.

The extant studies indicate that internal audit sourcing arrangements have a significant impact on external auditors' perceptions about the quality of the IAF and the extent of reliance placed by the external auditors on the IAF. Ahlawat and Lowe (2004) suggested that an out-sourced IAF is more purposeful compared to an in-house IAF. According to Glover *et al.* (2008), external auditors have a greater tendency to rely on the out-sourced work relative to the in-house internal auditors when there is high intrinsic risk. However, Coram *et al.* (2008) discovered that organizations that maintain IAF within have a high tendency for fraud detection and

self-reporting, and they infer that the in-house IAF is superior to the out-sourced IAF. According to Munro and Stewart (2010), external auditors utilize more of the internal auditors as subordinates for important testing at the time they provide an internal audit in-house. In Malaysia, Johl *et al.* (2013) found a positive association between internal audit quality and EM, irrespective of whether or not firms outsource their internal audit activities. Mansor *et al*. (2013) found the in-house IAF to be related to minimize the EM activities. Given the mixed evidence on the superiority of in-house versus out-sourced IAF, the next hypothesis is:

H_7: There is a significant association between the internal audit function sourcing arrangements and earnings quality.

3.3.3 Audit Committee Effectiveness

Based on the contention of several authors, there is a need for the AC, BOD and internal auditors to have a good relationship in order for the internal control mechanisms to be effective, and, ultimately, improve the quality of financial statements (Barua *et al.*, 2010; Cooper, 1993; Garcia *et al.*, 2010; Nagy & Cenker, 2002). Kalbers (1992) highlighted the importance that the head of internal auditors and the AC have yearly meetings. Scarbrough *et al.* (1998) argued that the failure of the IAF to access the AC could cause the IAF to be ineffective. On the other hand, some authors, including Strawser *et al.* (1995), and the Treadway Commission Report (1987), emphasized the robust and good relation of the AC working with internal auditors in discharging their duties. The quality of the IAF is an element of the company's internal control structure, this quality, according to these authors, is improved when the department of the internal audit submit their report directly to the AC.

In 2007, the Revised Code on Corporate Governance mandated that the board should establish other corporate governance mechanisms to enhance internal monitoring control. The AC is responsible to determine the internal auditor and the function of an internal audit is directly reported to the AC (corporate governance Principle 6 – Recognise and manage risks, Recommendation 6.2). The AC directly monitors and reviews the work of the IAF and plays a coordinating role between the IAF and the financial reporting quality. Thus, this study argues that the AC moderates the association between the IAF and EQ.

Sharma *et al.* (2011) examined the AC's moderating effect on the relationship between the auditors' client economic importance and EM. They found that AC moderates the relationship between client importance and EQ, and that the client importance-EM relationship is more significant when the AC deviates from best practices. Furthermore, Alves (2013) reported that the combined existence of the AC and external auditor (BIG4) is negatively related to EM, indicating that the AC moderates the relationship between external audit and EQ. Therefore, this study examines whether or not the AC moderates the relationship between IAF and EQ in companies listed on the Malaysian Main Market.

There are only a few studies that tackled the relationship between AC effectiveness and EQ and their findings have so far been inconclusive (e.g. Hunton *et al.*, 2011; Zaman *et al.*, 2011). From these findings, it appears that the effectiveness of the independent AC to enhance EQ hinges on their expertise, auditing process and meeting frequency. Hence, it is important to examine the AC's characteristics individually in order to explain why prior studies provided inconsistent findings. In

addition, the AC score based on all the above characteristics is also used. The present study proposes that the AC effectiveness score is positively related to EQ. It is argued that AC effectiveness is related to the EQ, because the AC is responsible for overseeing the financial process.

3.3.3.1 Audit Committee Size and Earnings Quality

As for the AC size, the studies of Lipton and Lorsch (2002), Lin *et al*. (2006) and Ismail *et al*. (2010) showed that the number of members impact the AC's decisions and that committees with fewer members are characterized by better coordination. Contrastingly, some empirical evidence reported that an increase in the AC size leads to a decrease in EM (Garcia *et al*., 2010; Lin *et al*., 2006). However, some previous studies found that AC size has no relationship with EQ (Adiguzel, 2013; Davidson *et al*., 2005; Katmon & Al Farooque, 2015; Soliman & Ragab, 2014; Xie *et al*., 2003).

In Malaysian firms, the results of the study of Ismail *et al.* (2010) are significant since interim reports are written to improve financial reporting and reduce managers-investors information asymmetry. Ahmad-Zaluki and Wan-Hussin (2010) investigated the effect of the mechanisms of corporate governance on the accuracy of earnings forecasts among the initial public offering (IPO) firms in Malaysia. They reported that AC size is significant and positively related to EQ. Mansor *et al.* (2013) found that AC size is related to lower DA (high EQ). However, Salleh and Haat (2014) found that the size of the AC has an insignificant association with EQ.

Based on the resource dependence theory, the size of the AC has turned out to be very resourceful, thus improving the audit quality as a result of distinct knowledge,

expertise and skills shared among the members (Hillman & Dalziel, 2003; Yassin & Nelson, 2012). For this reason, the current study considers the appointment of many members of the AC with financial expertise as a crucial strategy to have better financial reporting as well as the quality of the IAF given their various distinctive expertise, knowledge and experience in which the firms are opportune to take out useful resources. The expectation is that the greater the AC' size the more resources it has, and that it has a tendency to embark on a higher level of IAF in order to enhance the internal monitoring and make sure that better EQ is achieved for a firm. Furthermore, this study expects that very reliable financial reporting as well as better EQ will be provided by a firm that offers for payment a higher internal audit fees. Consequently, the shareholders' benefits and interests will be better protected. Thus, the following hypotheses are stated;

H_8: *There is a significant positive association between audit committee size and earnings quality.*

H_9: *Audit committee size significant moderates the relationship between investment in internal audit function and earnings quality.*

H_{10}: *Audit committee size significant moderates the relationship between the internal audit function sourcing arrangements and earnings quality.*

3.3.3.2 Audit Committee Independence and Earnings Quality

A high quality of financial reporting as noted by George (2003), and Mustafa and Youssef (2010), could originate from an independent board of directors. Xie *et al.* (2003), Vafeas (2005), and Krishnan, Wen and Zhao (2011) emphasised the importance of financial expertise for the members of the AC as well as for the independent directors in terms of understanding and interpreting the financial

information effectively. Thus, the EM will ultimately be minimized and the quality of financial reports will improve.

Some studies have attempted to connect the independent of AC with IAF. For example, Raghunandan *et al.* (2001) showed that ACs having independent directors and a minimum of one director with knowledge of accounting are more committed to holding meetings frequently together with the head of the department of internal audit. In a similar study, Scarbrough *et al*. (1998) showed that ACs that consist solely of independent directors have a tendency to hold meetings frequently together with internal auditors to go over their work. Cooper (1993) noted that the head of department of internal audit ought to give account to the AC directly and ought to hold frequent meetings with the committee. For this reason, DeZoort and Salterio (2001) indicated that when internal auditors have good communication with ACs it might result in an improvement in corporate governance quality. From the above studies, it can be argued that an independent AC is very important because independent directors on the AC moderate the relationship between the IAF duties and EQ because they have regular meetings and the internal audit report is submitted to the AC.

In addition, several prior empirical studies reported that having more independent members on the AC is related to lower EM and high EQ (Agrawal & Chadha, 2005; Ahmad-Zaluki & Wan-Hussin, 2010; Bedard & Johnstone, 2004; Bradbury *et al.*, 2006; Bradbury *et al.*, 2006; Davidson *et al.*, 2005; Garcia *et al.*, 2012; Klein, 2002; Mansor *et al.*, 2013; Mohamed Yunos, 2011; Saleh *et al.*, 2007; Saleh *et al*., 2013; Sharma & Kuang, 2014; Siagian & Tresnaningsih, 2011; Yang & Krishnan, 2005).

However, some previous studies also found an insignificant relationship between AC independence and EQ (Abdul Rahman & Ali, 2006; Abdullah, et al., 2014; Katmon & Al Farooque, 2015; Ismail *et al.*, 2010; Petra, 2007; Salleh & Haat, 2014; Yusof, 2010).

It is expected that a high percentage of AC independence enhances the IAF quality, which, in turn, leads to an increase in the quality of reported earnings. Thus, based on the argument for the effect of AC independence on IAF and EQ, this study leads to the following hypotheses:

H_{11}: *There is a significant positive association between audit committee independence and earnings quality.*

H_{12}: *Audit committee independence significant moderates the relationship between investment in the internal audit function and earnings quality.*

H_{13}: *Audit committee independence significant moderates the relationship between the internal audit function sourcing arrangements and earnings quality.*

3.3.3.3 Audit Committee Financial Expertise and Earnings Quality

The resource dependence theory explains that the AC's role is to provide resources in the form of expertise and experience in order for firms to gain competitive advantage, especially in financial reporting quality. These experts are expected to mitigate the agency problem that arises from the managers' ability to manipulate earnings reports. It is the duty of the AC to perform the assigned task diligently with the skills, knowledge and expertise that they have acquired to produce quality financial reporting. Because they indicate support for the financial statement credibility, ACs having financial expertise have been considered as a strength

(Burrowes & Hendricks, 2005), as lower EM (Badolato *et al*., 2014; Baxter & Cotter, 2009; He & Yang, 2014; Saleh *et al*., 2007; Sharma & Kuang, 2014; Soliman & Ragab, 2014; Yusof, 2010) and as high quality earnings reporting (Badolato, 2014; He & Yang, 2014; Hoitash & Hoitash, 2009; Qin, 2007; Sharma & Kuang, 2014; Soliman & Ragab, 2014). However, some studies (Abdullah, et al., 2014; Katmon & Al Farooque, 2015) found insignificant relationship between AC financial expertise and DA.

Having financial expertise in the AC shows that the internal audit programme will be reviewed (Raghunandan *et al*., 2001), and that this activity decreases the tendency for the misappropriation of assets in companies held by the company (Mustafa & Youssef, 2010). Indeed AC is potentially capable of improving the IAF effectiveness and the practices of external audit with implications for audit quality.

Additionally, previous experience in accounting and auditing will provide efficient monitoring for the IAF, which enhances this function, increases the accuracy of their investigation, and generates better corporate financial reporting quality. Likewise, the presence of EM and weak corporate governance may create a demand for better monitoring, which would suggest a positive relationship between these factors and the need for accounting financial experts (Krishnan & Lee, 2009). Hence, the following hypotheses are proposed:

H_{14}: *There is a significant positive association between audit committee financial expertise and earnings quality.*

H_{15}: *Audit committee financial expertise significant moderates the relationship between investment in the internal audit function and earnings quality.*

H_{16}: Audit committee financial expertise significant moderates the relationship between the internal audit function sourcing arrangements and earnings quality.

3.3.3.4 Chairman Former Audit Partner on Audit Committee and Earnings Quality

Former audit partners increase the effectiveness of the AC in internal monitoring because they have a level of professional experience and are highly qualified, which enhances earnings reliability in the financial reporting. Naiker and Sharma (2009) found a negative relationship between former audit partners and internal control deficiencies, and Flynn (2011) found that affiliated former audit partners enhance the level of EQ assurance. In a similar study, Chen, Lin and Lin (2008) found a significant negative relationship between former audit partners and DA. While, Menon and Williams (2004) found that firms with a former audit partner as officers or directors are associated with larger accruals suggesting a potential threat to audit independence. Additionally, in Malaysia, Yusof (2010) found formerly senior audit managers/partners associated with larger DA. In addition, Radzi *et al*. (2011) found that directors' former senior auditor is insignificantly related to DA.

Therefore, the present study investigates whether or not the chairman former audit partner on the AC (as an internal monitoring mechanism) affects earnings quality and moderates the effect between the IAF and EQ. The following hypotheses are proposed:

H_{17}: There is a significant positive association between chairman former audit partner on audit committee and earnings quality.

H_{18}: Chairman former audit partner on audit committee significant moderates the relationship between investment in the internal audit function and earnings quality.

H_{19}: Chairman former audit partner on audit committee significant moderates the relationship between the internal audit function sourcing arrangements and earnings quality.

3.3.3.5 Audit Committee Meetings and Earnings Quality

The effectiveness of the AC is implied by its meetings (Goh, 2009; Xie *et al.*, 2003). Empirical studies, such as Garcia *et al*. (2010) have shown that there is a significant negative relationship between the number of AC meetings and earnings manipulation. Saleh *et al.* (2007) in their study noted that for the AC tasks to be realized, it ought to be made up of independent members and be active. In addition, the independent members ought to hold frequent meetings. Studies in the past have reported findings concerning the importance of meetings frequency. For example, Xie *et al*. (2003) indicated that EM is negatively related to frequent AC meetings.

A study by Goh (2009) showed that ACs having frequent meetings have a positive relationship with timelier remediation of material weaknesses. Similarly, the result of Hoitash and Hoitash (2009) is similar to that of Goh (2009) with respect to the financial reporting quality. However, some prior empirical evidence indicated that there was no relationship between AC meeting and DA (proxy for EM) (Davidson *et al.*, 2005; Baxter and Cotter, 2009; Soliman & Ragab, 2014).

Strong preferences have always been expressed by regulators for an AC that holds frequent meetings. Past studies particularly depended on the number of meetings

held annually by the AC as a proxy for AC diligence due to other unobservable measures of diligence in public (DeZoort *et al.*, 2002).

In the context of Malaysian firms, the studies of Saleh *et al*. (2007), Salleh and Haat, (2014), and Yusof (2010) found that AC meetings are related to high EQ. However, Abdul Rahman and Ali, (2006), Abdullah, et al. (2014) and Mohamad, *et al.* (2012) found an insignificant relationship between AC meetings and EQ. Previous findings show that when ACs hold frequent meetings they have information relating to current auditing issues and are more diligent in discharging their duties, which, in turn, enhances the role of the IAF to increase the EQ. This is because the internal auditors' reports are submitted to the AC and there is a regular meeting between the internal auditors and the AC. Thus, based on the argument above, this study leads to the following hypotheses:

H_{20}: *There is a significant positive association between the frequency of audit committee meetings and earnings quality.*

H_{21}: *The frequency of audit committee meetings significant moderates the relationship between investment in the internal audit function and earnings quality.*

H_{22}: *The frequency of audit committee meetings significant moderates the relationship between the internal audit function sourcing arrangements and earnings quality.*

3.3.3.6 Audit Committee Score and Earnings Quality

The operation of corporate governance mechanisms is interdependent on the realization of overall effectiveness, which also relies on a specific combination. The

consideration of the optimal combination of mechanisms reduces the agency cost since the effectiveness of a specific mechanism relies on the effectiveness of other mechanisms (Hunton *et al.*, 2011; Zaman *et al.*, 2011). According to DeZoort *et al.* (2002) the effectiveness of the AC framework may improve substantially if the features of the AC are learned together. Agrawal and Chadha (2005) pointed out that independent directors having financial expertise have more value to provide oversight financial reporting. Moreover, Mustafa and Youssef (2010) contended that the independence of AC cannot be effective if the members are not financial experts. In addition, Xie *et al*. (2003) stated that an AC whose members have a financial background and have frequent meetings serves better as an internal control mechanism and enhances oversight of the financial reporting. With regards to meeting attendance, Saleh *et al*. (2007) claimed that independent members who have financial expertise but do not attend meetings will not enhance the AC effectiveness in increasing the financial reporting quality.

The effectiveness of ACs has five associated dimensions in this study namely, AC size, AC meetings (in terms of meeting frequency), AC members' financial expertise, AC chairman audit partner and independence of members of AC. The five dimensions are suitable constructs for examining the impact of the effectiveness of ACs on EQ. In addition, the constructs are based upon their possible contribution to audit quality, which ensures that the independence of the auditor is uncompromised by the influence of probable EQ. Financial expertise, independence, size of the AC and meetings all have significant relations with EQ (Ismail *et al*., 2010). Moreover, the modified version of the MCCG Code 2007 states that AC members must have financial knowledge in order to comprehend and clarify financial statements when

performing their monitoring function of the mechanisms of internal control and financial reporting of the company. In addition, the code requires that a minimum of one board member should be an accounting association member. It is expected that when the dimensions interact they have a greater tendency of affecting internal audit quality. For this reason, the current study pays attention to the joint impact of the aforementioned dimensions as a proxy for the effectiveness of the AC.

In order to investigate the effect of AC effectiveness on EQ, the current study employs a composite measure for the effectiveness of the AC, that is, the proportion of members of the AC, proportion of the independent members of the AC, the proportion of members who have financial expertise, the number of times the AC meets annually and AC chairman audit partner. Therefore, the current study contends that ACs must demonstrate the five features in order for them to be effective. The combination of the five independent variables gives a new composite construct known as AC score.

A review of past studies indicates that the effectiveness of internal auditing is related to the AC, which is likely to enhance the issues of corporate governance to improve EQ. Moreover, in content with previous arguments in the logical of the moderators effect of AC characteristics (size, independent, financial expertise, chairman audit partner and meetings) between the IAF and EQ. Thus, the current study argues that the engagement of these characteristics as a bundle (score) moderates the association between IAF and EQ. On the basis of this submission, the following hypotheses are made:

H_{23}: There is a significant positive association between the audit committee score and earnings quality.

H_{24}: The audit committee score significant moderates the relationship between investment in the internal audit function and earnings quality.

H_{25}: The audit committee score significant moderates the relationship between the internal audit function sourcing arrangements and earnings quality.

3.4 Research Method and Design

3.4.1 Sample Selection and Data Sources

To achieve the objectives of this study, a quantitative research method is employed. The companies listed on the Main Market are likely to have low information asymmetry because they require more paid-up capital and a longer trading history than those listed on the ACE Market (Johl *et al.*, 2013). Therefore, the population of the study is Malaysian listed companies on the Main Market of Bursa Malaysia, and the data used are collected from the annual reports. The population includes 822 companies for 2012 listed on the Main Market of Bursa Malaysia; the study period covers 4 years (from 2009 to 2012)[5]. This study includes 2009 because it was the first full year in which the listed firms had to disclose the cost of investment in the internal audit function (IAF). It was also included because the Bursa Malaysia Corporate Governance Guide (2009), which has been effective since 2009, is used as a guide to the variables related to corporate governance. The duration of the study is limited to a four-year period and thus makes the work viable because the cash flow from operating might be collected either in the current year or the subsequent year, which consequently influence the amount of accruals. Therefore, using dataset for

[5] The study population of 822 companies was listed at the end of the 2012 Main Market of Bursa Malaysia website: http://www.bursamalaysia.com/market/listed-companies/list-of-companies/main-market/

four years might overcome the reversal effect of cash flow from operating and accruals. Moreover, to obtain suitable homogeneity of the data, the study follows previous studies by excluding 51 financial related companies and unit trust firms (Yatim, *et al.*, 2006; Yunos, *et al.*, 2010), 123 firms with an uncompleted online annual report in any period between 2009 and 2012, and 139 companies that have missing data of the study variables. Therefore, the final study sample is 509 firms listed on the Main Market of Bursa Malaysia over the period 2009-2012. Table 3.1 provides a summary of the sample.

Table 3.1
Summary of Study Sample

Sample selection from 2009-2012	
Total number of companies listed on Bursa Malaysia Main Market	822
Less:	
Incomplete online annual report in any period between 2009-2012	123
Financial related companies	51
Missing variables data in any period between 2008-2012	139
Final sample	509

The study data were collected for two kinds of variable; namely, dependent and independent. The dependent variable includes earnings quality (EQ), which is measured by the residual absolute value of discretionary accruals (DA). The independent variables include the IAF, audit committee (AC) characteristics and board of directors' characteristics. The data for EQ were collected from DataStream. In instances where any of the financial data were missing from this source the annual reports of the firms were referred to. Concerning the independent variables, data were collected from the companies' yearly reports on the Bursa Malaysia website (www.bursamalaysia.com). Table 3.2 presents the data distribution by industry.

Table 3.2
Sample of Study by Industries

Industry	Firms	Observations	%
Construction	30	120	6
Consumer	84	336	16
Industrial product	163	652	32
Plantation	33	132	6
Property	49	196	10
Technology	23	92	5
Trading and Services	127	508	25
Total	509	2036	100

3.4.2 Variables Measurements

3.4.2.1 Dependent Variable Measurement

The concept of earnings quality (EQ) has many dimensions. For this reason, the choice of the measurement of EQ is based on the models for estimation and the data availability. Thus, in terms of the aim of this study to examine the association between internal monitoring mechanisms and EQ and the discretionary accruals (DA) as a proxy of EQ, high DA indicates low EQ and vice versa. In the following section, the DA models are reported.

The Modified Jones model by Dechow *et al.* (1995) is an effective model to detect EM. Previous studies find evidence that cash flows from operations are negatively associated with total accruals (e.g. Dechow, 1994; Dechow, Kothari and Watts, 1998; McNichols & Wilson, 1988; Rayburn, 1986). According to Pae (2005), who argue that by incorporating the systematic association between accruals and operating cash flows can be designing a more powerful test of earnings management and he find that operating cash flows greatly improve the explanatory and predictive power of the Jones model. Therefore, this study applied the measurement of DA following Kasznik (1999) who added change in operating cash flows to the Modified

Jones model of Dechow *et al.* (1995)[6]. The measurement has been used by previous studies (e.g. Adibah Wan Ismail, Anuar Kamarudin, Van Zijl & Dunstan, 2013; Veronica & Bachtiar, 2005). Ordinary least squares (OLS) regression by STATA (statistic program) is used to estimate the coefficients for each industry and year to calculate non-discretionary and DA based on the equation for the following models:

$$ACC_{it} /TA_{it-1} = a_0 + a_1 (1 / TA_{it-1}) + a_2 (\Delta REV_{it} - \Delta REC_{it} /TA_{it-1}) + a_3 (PPE_{it} /TA_{it-1}) + a_4 (\Delta CF_{it}/TA_{it-1}) + e_{it} \quad (1)$$

Where:

ACC_{it} = total accruals calculated by net income minus cash flows from operation

TA_{it-1} = prior total assets

ΔREV_{it} = change in sales or revenue

ΔREC_{it} = change in accounts receivables

PPE_{it} = property, plant and equipment

ΔCF_{it}= chamge in cash flows from operation in year *t*

it = i represent industry and t is a year

e_{it}= error term.

In this model, following Kasznik (1999), the study subtracts the change in accounts receivable from the change in revenues before estimation. Then, the industry- and year-specific estimates parameter estimates a_0; a_1; a_2; a_3 and a_4 are used to calculate non- discretionary accruals (NDA) in equation (2):

$$NDA_{it} = a_0 + a_1 (1 / TA_{it-1}) + a_2 (\Delta REV_{it} - \Delta REC_{it} /TA_{it-1}) + a_3 (PPE_{it} /TA_{it-1}) + a_4 (\Delta CF_{it}/T\ A_{it-1}) \quad (2)$$

[6]The Kasznik (1999) model found more explanation power to detect DA in study sample than Jones and modified Jones models by Dechow et al. (1995) and Kothari et al. (2005) see Appendix E.

The difference between the estimation (residuals) in equation (2) and actual accruals represents the total DA in the following equation.

$DA_{it} = ACC_{it} - NDA_{it}$ (3)

NDA = non- discretionary accruals (fitted values)

DA1 = discretionary accruals (Residuals)

The study in Korea by Yoon and Miller (2002), and Yoon *et al.* (2006), and a study in Bangladesh by Aminul Islam *et al.* (2011), and another study in India by Patro, and Pattanayak (2014) reported that the modified Jones model (Dechow *et al.,* 1995) is not effective for Asian firms and the extended modified Jones model by Yoon *et al.* (2006) has more explanatory power to explain the DA than the modified Jones model by Dechow *et al.* (1995)[7]. Therefore, this study applied the extended modified Jones model by Yoon *et al.* (2006) to examine the power of the research model in the context of the Malaysian Main Market listed companies described in equation (4):

$$ACC_{it}/REV_{it}=\beta_0+ \beta_1 (\Delta REV_{it}- \Delta REC_{it})/ REV_{it} + \beta_2 (\Delta EXP_{it} - \Delta PAY_{it}) / REV_{it} + \beta_3 (DEP_{it} + RET_{it}) / REV_{it} + e_t \quad (4)$$

Where

ΔEXP_{it} = change in sum of cost of goods sold and general administrative expenses excluding non-cash expenses.

ΔPAY_{it} = change in accounts payable

DEP_{it} = expenses of depreciation

RET_{it} = expenses of retirement benefits

[7] The Yoon et al. Yoon et al. (2006), model found more explanation power to detect DA in study sample than Jones and modified Jones models by Dechow et al. (1995) and Kothari et al. (2005) see Appendix E.

This model assumes that the total accruals will primarily consider the changes in both the cash sales revenue and in cash expenses and non-cash expenses (depreciation expenses and expenses for retirement benefits) (Yoon *et al*., 2006). Therefore, the DA are obtained by subtracting non-DA from the total accruals of every observation in the equation (5):

$$DA_{it}=ACC_{it}/REV_{it}- [\beta_0+ \beta_1 (\Delta REV_{it}- \Delta REC_{it})/ REV_{it} + \beta_2 (\Delta EXP_{it} - \Delta PAY_{it}) / REV_{it} + \beta_3 (DEP_{it} + RET_{it}) / REV_{it}] \quad (5)$$

According to Yoon *et al.* (2006), (ΔREV-ΔREC)/REV is the first extended model variable, representing changes in cash revenue. The cash revenue changes have to explain the outcome of the current accruals and reflect the non-discretionary portion of the revenue, and are expected to encapsulate the policy of the firm to maximize reported earnings through increased revenues at the end of the fiscal year.

The second explanatory variable is the change in the cost of goods sold and general administrative expenses ((ΔEXP-ΔPAY)/REV). It covers changes in cash expenses as the firm's management may not only utilize sales but also expenses in their earnings management (EM). If the model is not correctly extended to take both cash sales and cash expenses into consideration, it may fail to encapsulate the discretionary as well as the non-discretionary current accruals. Among the drawbacks of the modified Jones model is that the changes in the cash sales variable lack a predicted relationship with the total accruals, in that the total accruals should be positively related to the current accruals.

Nevertheless, it is not easy to predict the relationship between changes in cash sales and total accruals, and, thus, the predicted relations can either be positive or negative. At times, sales and receivables are employed for EM whereas at other times, expenses and payables are used for it. If only the first variable in the model ((ΔREV-ΔREC)/REV) is included, it may explain that the influence of cash expenses on the current accruals as both cash expenses and current accruals are interrelated to some level.

Moreover, the third variable ((DEP + RET) / REV) explains the relationship between non-cash expenses and non-current accruals, where the sum of depreciation expenses and retirement benefit expenses represent a non-discretionary degree of non-cash expense. In case the liabilities of the retirement benefits are not fully funded, the unfunded portion of it is considered as non-cash expenses. This information is provided along with the other non-cash expenses in the cash flow statement. Thus, the variable of depreciation expenses and retirement benefits expenses should be taken to calculate the non-cash expenses to calculate DA. The third variable is proposed to have a negative relationship with total accruals because non-cash expenses are subtracted from cash flows to obtain the reported earnings.

The absolute value of DA |DA| for both the discretionary accrual measurements represents the EM because the EM can be into income-increasing or income-decreasing accruals (Abdul Rahman & Ali, 2006, Becker *et al*. 1998, Bedard *et al.*, 2004; Bekiris & Doukakis 2011, Chen *et al* 2007, Jouber & Fakhfakh 2012, Kang *et al*., 2013, Klein, 2002, Lin & shih 2013; Prawitt *et al.*, 2009). According to Warfield

et al. (1995), the absolute value of DA is an effective proxy to be used to represent the combined impact of income increasing and income-decreasing of EM.

3.4.2.2 Independent Variables Measurements

3.4.2.2.1 Board of Directors Characteristics Measurements

Board independence is measured through the percentage of the total number of independent non-executive members over the total number of board members. According to Abdul Rahman and Ali (2006), board size refers to the total number of members on the board. DeFond, Hann and Hu (2005), and Chen *et al*. (2007) referred to board financial expertise as the percentage of the board members who are qualified or experienced in accounting or finance (with the inclusion of those who hold membership of professional accounting entities) to total board members and board meetings is measured by the frequency of board meetings held by the board of directors (See Table 3.6).

3.4.2.2.2 Board of Directors' Effectiveness Measurements

To decrease the agency cost and protect shareholders' interests, having optimal combination of mechanisms of corporate governance is viewed to be better, as corporate governance effectiveness is realized through various means and the specific effectiveness of the mechanism relies on the effectiveness of others (Rediker & Seth, 1995). According to Ward *et al*. (2009), looking at the corporate governance mechanisms as a bunch of mechanisms is the best way to guard the interests of shareholders without isolating one from the other because governance mechanisms operate in a complementary or substitutable manner. Ward *et al*. (2009) further pointed out that past studies reported somewhat mixed findings because they

consider governance mechanisms by isolating one from the other and the way each of the mechanisms deal with agency problems. Thus, the notion that the effectiveness of one mechanism relies on the other mechanisms has been neglected. Agrawal and Knoeber (1996) noted that such findings on the influence of one mechanism could mislead in such a way to indicate that the influence of some individual mechanisms on the performance of firms fade away in the combined model. Thus, it is likely that there is a stronger influence when the entire mechanism of corporate governance is investigated rather than in isolation (O'Sullivan *et al*., 2008).

Studies on the attitudes of managers have considered a "bundle of attributes" (Carpenter, Geletkanycz & Sanders, 2004; Kor, 2003) and their background characteristics' instead of investigating a single attribute or multiple characteristics separately. Empirical studies conducted by authors, such as Brown & Caylor (2006); Cassel, Giroux, Myers and Omer (2012); Goh (2009) and Hanlon, Rajgopal and Shevlin (2003), group many variables together as a proxy for governance factors to produce a corporate governance composite score. Following the same approach to capture aggregate relationships within a firm, the current study investigates whether the combined board of directors' characteristics and the combined AC's characteristics have a relationship with EQ. In particular, the current research develops the effectiveness score for the BOD, represented as BDSCORE, and the effectiveness score of the AC, represented as ACSCORE.

The present study adopts the direction taken by previous studies (Brown & Caylor, 2006; Chobpichien *et al.*, 2008; DeFond, Hann & Hu, 2005; Hanlon *et al.*, 2003; Hunton *et al.*, 2011; Johl *et al.*, 2013; Zaman *et al.*, 2011) and utilizes a composite

governance score to gauge the board of directors' effectiveness with individual analysis for these four board characteristics (board independence, size, financial expertise and meetings). The composite measure (or the score), which totals the four board characteristics' values for the development of measurement synopsis of the effectiveness of the BOD which gets a score is going to be bounded by 0-1 (as indicated in Table 3.3). The sum of four components: board score, ranges from 0-4 with 0 indicating the lowest effectiveness, and 4, the highest effectiveness of the board.

Table 3.3
Constructing the Board of Directors' Effectiveness

Variables	Acronym	Measurement	Theories
Board size	BDSIZE	Dummy variable equals "1" for board members larger than the sample median and equals "0" otherwise (Chobpichien *et al.*, 2008; Johl *et al.*, 2013).	Agency theory and resource dependence theory
Board independence	BDIND	Dummy variable equals "1" if the independence of board members larger than the sample median and equals "0" otherwise (Chobpichien *et al.*, 2008).	Agency theory and resource dependence theory.
Board financial expertise	BDEXPERT	Dummy variable equals "1" if the percentage of financial experts is more than the sample median and equals "0" otherwise (Chobpichien *et al.*, 2008)	Agency theory and resource dependence theory
Board meetings	BDMEET	Dummy variable equals "1" if the number of meetings frequency is more than the sample median and equals "0" otherwise (Chobpichien *et al.*, 2008; Johl *et al.*, 2013).	Agency theory and resource dependence theory.
Board of directors effectiveness Score	BDSCORE	The sum of four components: board score, it is ranging from 0-4 with 0 indicating lowest effectiveness and 4 highest effectiveness of the board (Chobpichien *et al.*, 2008; Goh 2009; Johl *et al.*, 2013).	Agency theory and resource dependence theory.

3.4.2.2.3 Audit Committee Characteristics Measurements

According to Abdul Rahman and Ali (2006), the AC is measured by the percentage of the total number of independent non-executive members divided by the total number of AC members. AC size is the total number of AC members; AC financial expertise is the ratio of the AC with accounting and financial knowledge to total members; chairman audit partner is the chairman of the AC who was previously a senior auditor in an audit firm (senior manager or partner), and the AC meetings is measured by the frequency of AC meetings (Goh, 2009; Saleh *et al*., 2007; Xie *et al*., 2003, Yusof 2010) (see Table 3.5).

3.4.2.2.4 Audit Committee Effectiveness Measurements

Prior studies (Brown & Caylor, 2006; Chobpichien *et al*. 2008; DeFond *et al.*, 2005; Hanlon *et al.*, 2003; Hunton *et al.*, 2011; Zaman *et al.*, 2011) made use of a composite governance score in their measurement of the AC members and the present study does the same. The score refers to a composite measure of the total value of the five dichotomous AC characteristics to develop a firms summary of its effectiveness; it takes a score bounded by 0-1 (see Table 3.4). High scores reflect higher AC effectiveness. The five characteristics considered in this measurement include AC meeting frequency, financial expertise, size, AC chairman audit partner and independence of AC, and they range from 0-5.

Table 3.4
Constructing the Audit Committee Effectiveness

Variables	Acronym	Measurement	Theories
AC size	ACSIZE	Dummy variable equals "1" for AC size larger than the sample median and equals "0" otherwise (Chobpichien *et al.*, 2008; Zaman *et al.*, 2011).	Agency theory and resource dependence theory.
AC independence	ACIND	Dummy variable equals "1" if the independence of the AC members is larger than the sample median and equals "0" otherwise (Chobpichien *et al.*, 2008).	Agency theory and resource dependence theory.
AC financial expertise	ACEXPERT	Dummy variable equals "1" if the percentage of financial experts is more than the sample median and equals "0" otherwise (Chobpichien *et al.*, 2008; Zaman *et al.*, 2011).	Agency theory and resource dependence theory.
AC Chairman former audit partner	ACCHPAR	Dummy variable equals "1" if the chairman of AC who was previously a senior/partner auditor in audit firm and equals "0" otherwise (Yusof, 2010)	Agency theory and resource dependence theory
AC meetings	ACMEET	Dummy variable equals "1" if the number of meetings frequency is more than the sample median and equals "0" otherwise (Chobpichien *et al.*, 2008; Zaman *et al.*, 2011).	Agency theory and resource dependence theory.
AC effectiveness Score	ACESCORE	The sum of five components: AC score ranges from 0-5 with a higher score indicating a higher effectiveness of the AC (Chobpichien *et al.*, 2008; Zaman *et al.*, 2011).	Agency theory and resource dependence theory.

3.4.2.2.5 Internal Audit Function Measurements

Prior studies, for example Johl *et al.* (2013), and Wan-Hussin and Bamahroes (2013), Carcello *et al.* (2005) highlighted two IAF attributes: investment in, and sourcing arrangement using the natural log of the internal audit cost disclosed in the Malaysian companies annual reports. This amount (cost) measures the investment in

the IAF. Further, the sourcing arrangement (in-house or out-sourced) measurement is "1", if IAF is established in-house, "0" otherwise (see Table 3.6).

3.4.2.3 Control Variables Measurements

The current study takes into consideration in the regression model some controlled variables due to the previous evidence that these variables are related to EQ. These controlled variables include firm size, leverage, firm performance (ROA), audit quality, ownership concentration, income loss and firm sales growth.

This study chooses to control the influence of firm size (represented by FSIZE). To do this the study considers total assets in its natural log (Ismail *et al.*, 2010; Peasnell *et al.*, 2005; Abdul Rahman & Ali, 2006). It is expected that large firms report a higher quality of earnings since they are closely monitored in the capital markets (Ismail *et al.*, 2010), and, for this reason, they rarely partake in EM (Klein, 2002; Peasnell *et al.*, 2005; Abdul Rahman & Ali, 2006). The current study proposes that firm size is positively related to EQ.

To control for firm leverage (LEV), the ratio of total liabilities to total assets is calculated. It is expected that firms with higher leverage report lower quality of earnings. On the other hand, firms that face the challenges of financial constraints are more likely to partake in an upward management of earnings and stay away from probable loss because financial problems have the capability of lowering the quality of financial reports (Park & Shin, 2004). The study of Klein (2002) and Davidson *et al*. (2005) showed that leverage has a significant positive relation with EM activities.

In order to control for firm performance, this study used return on assets represented by ROA. The ROA is measured in terms of the ratio of earnings before interest and tax (EBIT) to the total assets (Abdul Rahman & Ali, 2006; Ismail *et al.*, 2010). Firms that have the characteristics of low performance have the tendency of taking part in EM (Abdul Rahman & Ali, 2006). Therefore, the current study predicts that firm performance is positively related to EQ.

In the present study, audit quality, represented by BIG4, is measured by the BIG4 audit firms. The expectation is that because of the higher expertise and resources the BIG4 have relative to their smaller counterparts, they will affect earnings positively with respect to the detection of EM activity (Davidson *et al.*, 2005). A value of one "1" for audit quality is given in the case where the BIG4 firms audit the company otherwise the value is "0" (Abdul Rahman & Ali, 2006; Davidson *et al.*, 2005; Rusmin, Astami & Hartadi, 2014).

The study also controls the ownership concentration represented by OWCO. The most commonly used approach for the measurement of ownership concentration is to obtain the share holdings of the largest shareholder (e.g. Thomsen & Pedersen, 2000). Ownership concentration is measured in this study by summing the five largest shareholders following previous studies (Claessens *et al.*, 2000; De Miguel, Pindado & De La Torre, 2004; Demsetz & Villalonga, 2001; Gedajlovic & Shapiro, 2002; Thomsen & Pedersen, 2000).

Sales growth and loss can affect the accruals or DA of firms. Ahmed *et al.* (2002) argued that sales growth affects accruals like inventory and receivables. Following

prior research, this study defines sales growth as the difference between the current and prior year revenue over prior year revenue. Dechow *et al.* (2003) documented that firms manage earnings to avoid reporting a loss and that they have higher DA than other firms. The study also assigns loss a value of "1" if income before extraordinary items is less than "0" in the current year and a value of "0" otherwise. In addition, dummy variables for years and industries are included in this study to control the influence of industry type and time period (see Table 3.7).

Table 3.5
Summary of the Dependent Variable Measurement

Variables	Acronym	Measurement	Theories
EQ	DA1	The absolute value of DA of the firm estimated residuals, the high residuals absolute value indicating low EQ and vice versa, using the modified Jones model by Kasznik (1999).	Agency theory
	DA2	The absolute value of DA of the firm estimated residuals, the high residuals absolute value indicating low EQ and vice versa, using the Yoon *et al.* (2006) model.	Agency theory

Table 3.6
Summary of Independent Variables Measurements

Variables	Acronym	Measurement	Theories
Board size	BDSIZE	Total number of board members (Abdul Rahman & Ali, 2006; Mohamad *et al.*, 2012).	Resource dependence theory
Board independence	BDIND	Percentage of total number of independent non-executive members divided by the total number of board members (Abdul Rahman & Ali, 2006; Mohamad *et al.*, 2012).	Agency theory and resource dependence theory
Board financial expertise	BDEXPERT	Percentage of board members with qualifications or experience in accounting or finance, including those who are members of	Agency theory and resource dependence theory

Table 3.6 (continued)

Variables	Acronym	Measurement	Theories
		accounting professional bodies (DeFond *et al.*, 2005; Chen *et al.*, 2007).	
Board meetings	BDMEET	Board of directors meeting frequency in a fiscal year (Xie *et al.*, 2003).	Agency theory and resource dependence theory
AC size	ACSIZE	Total number of AC members (Saleh *et al.*, 2007).	Agency theory and resource dependence theory
AC independence	ACIND	Percentage of total number of independent non-executive members divided by the total number of AC members (Abdul Rahman & Ali, 2006; Mohamad *et al.*, 2012).	Agency theory and resource dependence theory
AC financial expertise	ACEXPERT	The ratio of AC with accounting and financial knowledge to total members (Saleh *et al.*, 2007; Goh, 2009; Zaman *et al.*, 2011).	Agency theory and resource dependence theory
AC chairman former audit partner	ACCHPAR	Dummy variable equals "1" if the chairman of AC who was previously a senior auditor in audit firm and equals "0" otherwise (Yusof, 2010)	Agency theory and resource dependence theory
AC meetings	ACMEET	Frequency of AC meeting (Saleh *et al.*, 2007; Xie *et al.*, 2003; Zaman *et al.*, 2011).	Agency theory and resource dependence theory
Investment in IAF	IAFINV	The natural log of the internal audit cost (Johl *et al.*, 2013; Wan-Hussin & Bamahroes, 2013; Carcello *et al.*, 2005).	Agency theory and resource dependence theory
IAF sourcing arrangement	IAFSOU	Equals "1", if IAF is established in-house, and "0" otherwise (Johl *et al.*, 2013; Wan-Hussin & Bamahroes, 2013).	Agency theory and resource dependence theory

Table 3.7
Summary of Control Variables Measurements

Variables	Acronym	Measurement	Theories
Firm size	FSIZE	Natural log of total assets (Ismail *et al.,* 2010; Peasnell *et al.,* 2005; Abdul Rahman & Ali 2006).	Agency theory
Leverage	LEV	The ratio of total liabilities to total assets (Park and Shin 2004; Klein 2002; Davidson *et al.,* 2005).	Agency theory
Profitability	ROA	The ratio of earnings before interest and tax (EBIT) to total assets (Abdul Rahman & Ali 2006; Ismail *et al.* 2010).	Agency theory
Audit Quality	BIG4	Equals "1" if the firm is audited by BIG4 Auditors; and "0" otherwise (Abdul Rahman & Ali 2006; Davidson *et al.,* 2005).	Agency theory
Ownership Concentration	OWCO	Shareholding by largest five shareholders (Gedajlovic & Shapiro 2002).	Agency theory
Loss	LOSS	Dummy variable equals "1" if the net income is less than zero and "0" otherwise.	Agency theory
Sales growth	SGROWTH	Sales growth, annual sales growth (current year sales – prior year's sales)/prior year's sales	Agency theory

3.4.3 Data Analysis Technique

Many statistical methods are utilized to reach an accurate conclusion about EQ. First, the data in this study are analysed using descriptive and inferential statistics. In the descriptive statistics, frequency and percentage are used to describe the research data (Sekaran, 2000). The central tendency measurement is conducted using the statistical tools of minimum, maximum, mean, median, standard deviation.

The inferential statistics are used in the correlation and multiple regression analysis. The Pearson correlation is utilized to gauge the linear bivariate significance among variables (Zou, Tuncali & Silverman, 2003) and the hierarchical regression analysis is used to determine the relationship between the independent, moderating and

dependent variables in terms of direction, level and strength (Hair, Anderson, Tatham & William, 1998).

3.4.3.1 Correlations

Pearson correlation analysis is utilized to establish the variables' relationships (Zou, *et al.*, 2003). The Pearson correlation is useful in testing relationships between the independent and dependent variables. Through this analysis, it becomes possible for the researcher to determine whether or not a relationship exists between variables, as well as the strength and direction of the relationship. In cases where the correlation is higher than 0.80 in the correlation matrix created by the independent variables, this result needs to look at the variance inflation factor (VIF) if the tolerance value is less than 0.1 or a VIF value of more than 10 indicates multicollinearity, which could become a problem that increases the slandered error estimates that lead to misleading results (Hair *et al.*, 2006; Cohen & Cohen, 1983). However, to solve the multicollinearity problem the transformation of data using the standardizing approach is a useful method by subtraction of the original value of data with its mean, then the resulting data are divided by the standard deviation ((raw score – mean)/ standard deviation).

3.4.3.2 Multiple Regression Analysis Models

The primary benefit of mutative methods is their coping abilities with multiple variables in an attempt to understand complex relationships that go beyond univariate and bivariate methods (Hair *et al*., 1998). The study objectives mentioned in Chapter One are dedicated to examining the internal governance monitoring mechanisms and their relationships with earnings quality (EQ). Specifically, this study attempts to

examine the relationship at the aggregate level between the board of directors (BOD) and audit committee (AC) on EQ and at the individual level. It attempts to examine the relationship between the internal audit function (IAF) and the EQ. The models used to achieve these objectives are listed below:

Model 1:

This model examines the relationship between the BOD' and AC effectiveness, and the IAF as independent variables and control variables with EQ as the dependent variable.

$EQ(|DA|) = \beta_0 + \beta_1 BDSIZE + \beta_2 BDIND + \beta_3 BDEXPERT + \beta_4 BDMEET + \beta_5 IAFINV + \beta_6 IAFSOU + \beta_7 ACSIZE + \beta_8 ACIND + \beta_9 ACEXPERT + \beta_{10} ACCHPAR + \beta_{11} ACMEET + \beta_{12} FSIZE + \beta_{13} LEV + \beta_{14} ROA + \beta_{15} BIG4 + \beta_{16} OWCO + \beta_{17} LOSS + \beta_{18} SGROWTH + \beta_{19} YEARS + \beta_{18} INDUSTRIES + e.$

Where:

EQ = Earnings Quality measured by Discretionary Accruals

BDSIZE = board size

BDIND = board independence

BDEXPERT = board financial expertise

BDMEET = board meetings

IAFINV = investment in Internal Audit Function

IAFSOU = source arrangement of Internal Audit Function

ACSIZE = Audit Committee size

ACIND = Audit Committee independence

ACEXPERT = Audit Committee financial expertise

ACCHPAR = Audit Committee chairman audit partner

ACMEET = Audit Committee meeting

FSIZE = firm size

LEV = firm leverage

ROA = return on assets or firm profitability

BIG4= audit quality

OWCO = ownership concentration

LOSS = income negative (loss)

SGROWTH = sales growth

YEARS= study years

INDUSTRIES = industries

e = error term

Model 2:

This model examines the relationship between the score for the board and AC effectiveness and IAF, and control variables with EQ.

$EQ\ (|DA|) = \beta_0 + \beta_1\ BDSCORE + \beta_2\ ACSCORE + \beta_3\ IAFINV + \beta_4 IAFSOU + \beta_5 FSIZE + \beta_6 LEV + \beta_7 ROA + \beta_8 BIG4 + \beta_9\ OWCO + \beta_{10} LOSS + \beta_{11} SGROWTH + \beta_{12}\ YEARS + \beta_{13}\ INDUSTRIES + e.$

Where:

BDSCORE = board of directors score

ACSCORE = audit committee score

3.4.3.3 Hierarchical Regression

Hierarchical regression analysis reveals the variables order of entry. F-tests are utilized to calculate the significance of every added variable (or sets of variables) to the explanation that is providing by R^2 (Cohen & Cohen, 1983). The hierarchical

regression analysis is an alternate process to betas comparison for assessment of the importance of the independent variables. In addition, in complex versions of hierarchical analysis, the model may entail a series of moderating variables, which depend on independent variables but are, at the same time, independent in terms of the ultimate dependent variable. Hierarchical multiple regression may entail a series of regressions for every moderating impact on the relationship of the independent-dependent variables (Zou, *et al.*, 2003).

This study also aims to examine the moderating effect of AC effectiveness (independent, size, financial expertise, chairman audit partner, meeting and AC score) in the relationship between IAF and earnings quality. In other words, the relationship between the IAF and EQ depends on the percentage of the effectiveness of the AC. Hence, in order to satisfy this objective, this study conducted multiple hierarchical regression analysis to examine the moderator variables.

Data regression followed several stages, as recommended by Baron and Kenny (1986). First, the control variable (size, leverage, profitability, audit quality, sales growth, loss and ownership concentration) and the EQ were entered. The second step entailed the regression of the independent variables against the dependent variable. This is followed by the third step in which the independent variables and the moderators are regressed against their dependent counterparts. In the final stage, the control variables, the independent variables and the interaction between the independent variable and moderators are regressed with the dependent variables. The stages are presented in the following equations:

Step 1:

EQ = a + β_1FSIZE+ β_2 LEV+ β_3 ROA+β_4 BIG4+ β_5 OWCO + β_6 SGROWTH+ β_7LOSS + β_8 YEARS+ β_9 INDUSTRIES + e.

Step 2:

EQ = a + β_1FSIZE+ β_2 LEV+ β_3 ROA+β_4 BIG4+ β_5 OWCO +β_6 SGROWTH+ β_7LOSS + β_8 YEARS+ β_9 INDUSTRIES + β_8IAFINV + β_9IAFSOU + e.

a) Individual level

Step 3:

EQ = a + β_1FSIZE+ β_2 LEV+ β_3 ROA+β_4 BIG4+ β_5 OWCO + β_6 SGROWTH+ β_7 LOSS + β_8 YEARS + β_9 INDUSTRIES + β_{10}BDSIZE + β_{11}BDIND + β_{12} BDEXPERT+ β_{13} BDMEET+β_{14}IAFINV + β_{15}IAFSOU + β_{16}ACSIZE + β_{17}ACIND + β_{18} ACEXPERT + β_{19}ACCHPAR + β_{20}ACMEET + e.

Step 4:

EQ = a + β_1FSIZE+ β_2 LEV+ β_3 ROA+β_4 BIG4 + β_5 OWCO + β_6 SGROWTH+ β_7 LOSS+ β_8 YEARS + β_9 INDUSTRIES + β_{10}BDSIZE + β_{11}BDIND + β_{12} BDEXPERT+ β_{13} BDMEET + β_{14}IAFINV + β_{15}IAFSOU+ β_{16}ACSIZE + β_{17}ACIND + β_{18}ACEXPERT + β_{19}ACCHPAR + β_{20}ACMEET + β_{21}IAFINV* ACSIZE+β_{22}IAFSOU*ACSIZE + β_{23}IAFINV*ACIND + β_{24}IAFSOU*ACIND +β_{25}IAFINV*ACEXPERT+β_{26}IAFSOU*ACEXPERT+β_{27}IAFINV*ACCHPAR+β_{28}IAFSOU*ACCHPAR+β_{29}IAFINV*ACMEET+β_{30}IAFSOU*ACMEET +e.

b) Score level

Step 3:

$$EQ = a + \beta_1 FSIZE + \beta_2 LEV + \beta_3 ROA + \beta_4 BIG04 + \beta_5 OWCO + \beta_6 SGROWTH + \beta_7 LOSS + \beta_8 YEARS + \beta_9 INDUSTRIES + \beta_{10} BDSCORE + \beta_{11} ACSCORE + \beta_{10} IAFINV + \beta_{12} IAFSOU + e.$$

Step 4:

$$EQ = a + \beta_1 FSIZE + \beta_2 LEV + \beta_3 ROA + \beta_4 BIG04 + \beta_5 OWCO + \beta_6 SGROWTH + \beta_7 LOSS + \beta_8 YEARS + \beta_9 INDUSTRIES + \beta_9 BDSCORE + \beta_{10} ACSCORE + \beta_{11} IAFINV + \beta_{12} IAFSOU + \beta_{13} IAFINV*ACSCORE + \beta_{14} IAFSOU*ACSCORE + e.$$

3.5 Chapter Summary

This chapter discusses in detail the research framework, sample selection, data sources and measurement of the variables. Further, this chapter discusses the technique research method and design that are used to test the hypotheses. An extensive literature review based on econometric studies and surveys has been conducted to identify the determinants of EQ. In this study, secondary sources of data are used to examine whether or not board of directors' effectiveness, AC effectiveness and IAF influence the EQ in Malaysia. This study also examines the effect of AC as a moderator between IAF and EQ in Malaysian companies.

CHAPTER FOUR
DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter reports and discusses the findings of the relationship between internal monitoring mechanisms and earnings quality. Specifically, chapter four seeks to provide answers to the research questions: To what extent do effectiveness of the BOD and audit committee, internal audit function, and firm-specific characteristics influence the earnings quality in companies listed on the Malaysian Main Market?

The present chapter's organization is as follows: section 4.2 contains the discussion concerning the descriptive statistics of the dependent, independent and control variables and section 4.3 explains the univariate analysis of the continuous and dichotomous variables employed in the regression tests in section 4.3. Section 4.4 provides the results of the multiple regression analysis of the examined models and section 4.5 provides the outcomes of additional analyses carried out to determine the regression analysis in terms of its sensitivity and robustness. The chapter ends with the summary of the chapter in section 4.6.

4.2 Descriptive Statistics

4.2.1 Descriptive Statistics of Dependent Variables

In Table 4.1, the coefficient of the modified Jones model by Kasznik (1999), and the extended modified Jones model by Yoon *et al*. (2006) are estimated using Pooled cross-sectional OLS regression over the period 2009-2012 and cover seven industries. The aim of this estimation is to assess the ability of the earnings quality (EQ) models to differentiate between discretionary and non- discretionary accruals for each firm.

Table 4.1 shows the coefficients of the modified Jones model (Kasznik, 1999) variables. Aligned with the expectations, the property, plant and equipment (PPE) variable obtained a negative sign indicating an income-decreasing accrual attributed to depreciation and amortisation expense. Meanwhile the sign obtained by the average coefficient of change in revenue is positive but the change in revenue effect is not as direct as the change in property, plant and equipment (PPE), as the former can lead to income-increasing or income-decreasing changes in some working capital accounts. This is evidenced by the increases in accounts receivable from income-increasing and those in accounts payable from income-decreasing. The revenue coefficient is positive (See Table 4.1) indicating that income-increasing dominates the sign of the revenues change.

Additionally, the model was found to be significant at the significance level of 1%. The explanatory power of Kasznik's (1999) model is 12.82% indicating that the model fits and that it generates credible estimates for separating total accruals into discretionary and non-discretionary elements (Bernard & Skinner, 1996; Davidson *et al*., 2005).

In Table 4.1, the OLS multiple regressions for the extended modified Jones model by Yoon *et al.* (2006) is also presented. This table indicates that the model is significant at the level of 1%. The Yoon *et al.* (2006) model has an explanatory power of 47.54%, which means that the model is fit and the estimation produced is credible.

Table 4.1
OLS Multiple Regression Results of Discretionary Accruals

	M-Jones by (Kasznik, 1999) Model		Extended M-Jones by Yoon *et al.* (2006)		
Variables	**Coef.**	**t-stat**	**Variables**	**Coef.**	**t-stat**
_cons	0.0178***	3.73	_cons	0.0852	1.57
$1 / TA_{t-1}$	-1028.030***	-2.95	(ΔREV– ΔREC)/ REV	-0.0924***	-19.91
$(\Delta REV - \Delta REC) / TA_{t-1}$	0.0313***	3.16	(Δ EXP – ΔPAY) / REV	0.1321***	23.50
$PPE / T A_{t-1}$	-0.0248***	-2.88	(DEP + RET) / REV	-3.8545***	-29.95
$\Delta CFt / T A_{t-1}$	-0.4518***	-16.76			
F-value	74.94			613.74	
Sig	0. 000			0. 000	
R-squared	0.1282			0.4754	
N	2032			2032	

Additionally, Table 4.2 and Figures 4.1 present the descriptive statistics of discretionary accruals DA1 (modified Jones model by Kasznik, (1999)) and DA2 (extended modified Jones model by Yoon *et al.* (2006)) across Bursa Malaysia industries (sectors); namely, construction, consumer product, industrial product, plantation, properties, technology, and trade and services.[8]

Table 4.2 and Figure 4.1 show that the plantation sector has the lowest average of absolute value of DA1 (Kasznik, 1999), which is about 3.5%, while the technology sector has the highest average of absolute value, which is about 7.7%. Also, Table 4.2 and Figure 4.2 indicate that the industrial product sector has the lowest average absolute value of DA2, which is about 15.4%, while the consumer sector has the highest-value of 106.1%, in terms of the extended modified Jones model of Yoon *et al.* (2006). This result is similar to Beasley *et al.* (2000), who found that the nature of earnings management (EM) differs by industry and that certain industries have more particular types of discretionary accrual than other industries.

[8]Some industries that have less than eight observations are included in a related industry. For example, the Hotel sector, which has four companies and the IPC sector, which also has four companies, are added to the trade and services sector.

Table: 4.2

Descriptive Statistics of DA1 and DA2 by Industries

Industry	Dependent Variable	N	Min.	Max.	Mean	Median	Standard Deviation
Construction	DA1	120	0.00047	0.25579	0.05490	0.04742	0.04517
	DA2		0.00022	2.93628	0.19653	0.10657	0.34980
Consumer	DA1	336	0.00004	0.92061	0.06596	0.04385	0.09315
	DA2		0.00096	42.42805	1.06098	0.39400	3.85479
Industrial Product	DA1	652	0.00003	0.54657	0.06291	0.04400	0.06852
	DA2		0.00002	5.64970	0.15442	0.06561	0.41346
Plantation	DA1	132	0.00008	0.24524	0.03508	0.02505	0.03788
	DA2		0.00344	21.75454	0.75638	0.30271	2.49192
Properties	DA1	196	0.00003	0.28969	0.04590	0.03295	0.04587
	DA2		0.00257	11.38105	0.48423	0.20306	0.99865
Technology	DA1	92	0.00054	0.42202	0.07733	0.06062	0.06880
	DA2		0.00537	1.86560	0.16840	0.08765	0.26984
Trade-Service	DA1	508	0.00005	0.53196	0.05376	0.03926	0.05453
	DA2		0.00014	4.42709	0.20254	0.09567	0.36140
All	DA1	2036	0.00003	0.92061	0.05787	0.04017	0.06621
	DA2		0.00002	42.42805	0.38993	0.12026	1.77594

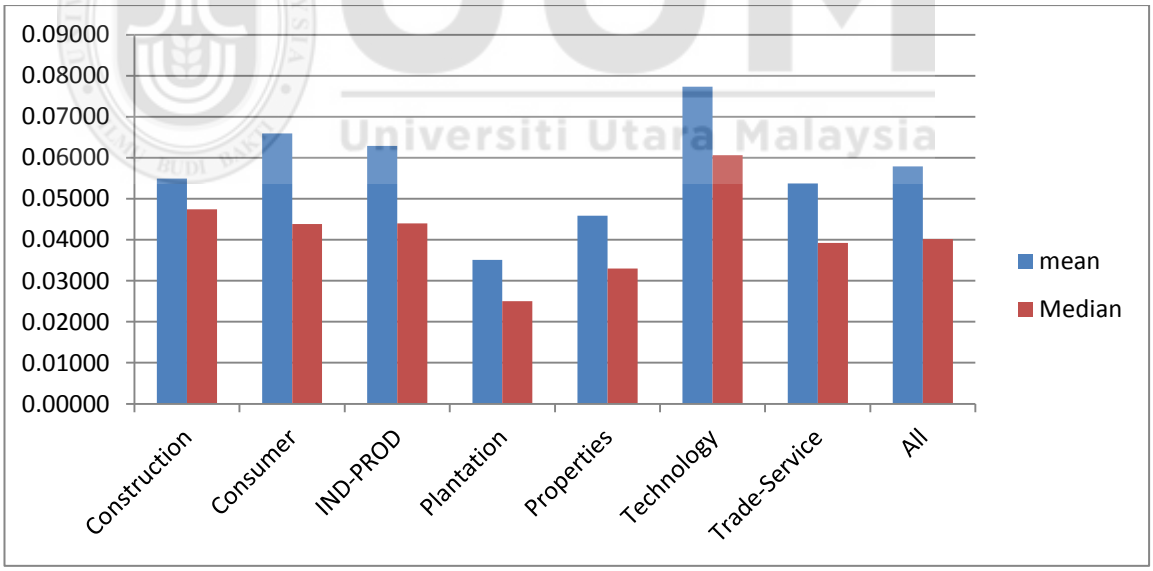

Figure 4.1

DA1 by Industry at Bursa Malaysia Main Market Companies

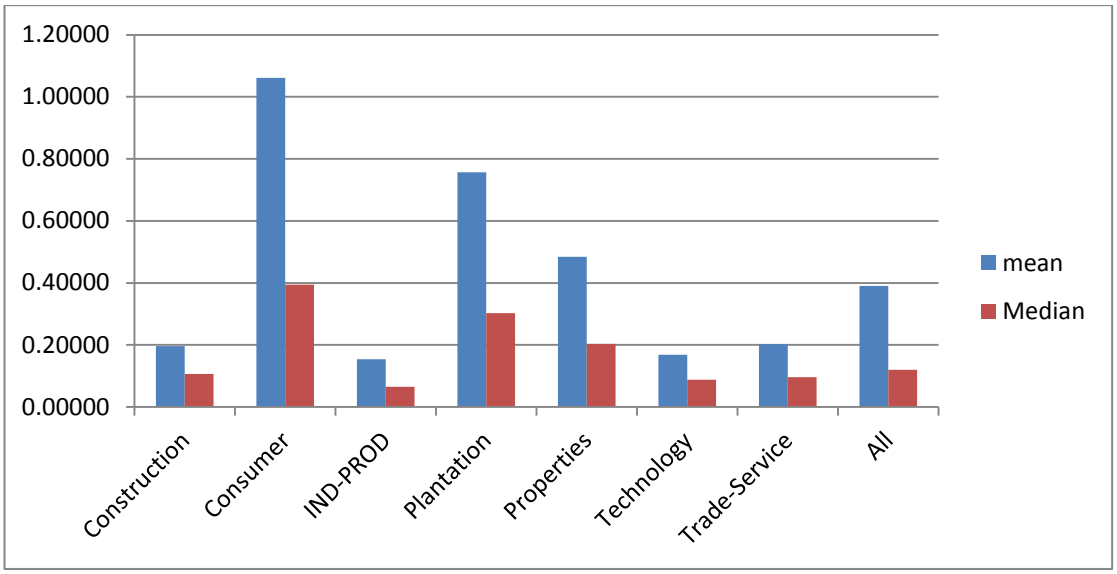

Figure 4.2
DA2 by Industry at Bursa Malaysia Main Market Companies

In addition, the descriptive statistics of EQ are reported in Table 4.3 for the absolute values of discretionary accrual estimated using the two different measurements DA1 and DA2. The minimum value of DA1 based on the Modified Jones Model by Kaszink (1999) is 0.001 and the maximum is 0.290, while the average value is 0.056. These results are less than those of Adibah Wan Ismail *et al*. (2013) based on the modified Jones Model of Kasznik (1999). In terms of DA2 based on Yoon *et al.* (2006), Table 4.3 shows that the minimum absolute value is 0.007, the maximum is 1.45 and the average value is 0.256.

4.2.2 Descriptive Statistics of Independent Variables

The descriptive statistics for the continuous variables based on the minimum, maximum, average and standard deviation are presented in Table 4.3 and the dichotomous variables based on the frequency and the percentage of the variables in the study sample are presented in Table 4.4. Table 4.3 reports the descriptive statistics of the continuous variables. The average (mean) board size (BDSIZE) reported in this study is 7.474. This average is similar to the studies conducted by

Ismail *et al.* (2010) and Saleh *et al.* (2005) among Malaysian listed companies, and is within the range of seven to eight directors recommended by Jensen (1993) for board effectiveness. However, this board size in Malaysia is considered to be slightly higher in comparison with what has been found in other studies in other East Asian countries. For example in Korea the average board size is about 5-6 (Kang & Kim, 2012), while the average board size in Malaysia is lower in comparison to 7.7 for Singaporean companies (Cheng & Courtenay, 2006).

The average for board independence (BDIND) reported in this study is 45.2%, which is similar to the findings of Yunos *et al.* (2010). The descriptive statistics indicate that companies have complied with the recommendations of the Code on Corporate Governance in Malaysia to have at least one third of the board comprising independent directors. However, the minimum for the independent directors is 25%, because 36 firms have less than 30% independent directors, which represents 7% from this study sample. The statistics also indicate that the average for board financial expertise (qualification or experience on accounting, finance and audit) (BDEXPERT) is 33.5%. This percentage is slightly higher, which indicates that companies have an effective internal monitoring mechanism in the reporting process and is more likely to increase EQ.

With respect to the frequency of board meetings (BDMEET), the statistics indicate that the average number of board meetings is 5.349 in the Malaysian Main Market listed companies. Although the average number of board meetings provides evidence that, generally, the Malaysian companies follow the recommendation of the Code on Corporate Governance (i.e. at least 4 meetings per year), companies hold

fewer meetings than what the code recommends. The minimum number of board meetings is two per year for 11 companies, which represents about 2% from the study sample. In addition, Table 4.3 reports that the average score for the board of directors' effectiveness is 1.50 with a minimum score of "0" and a maximum score of "4".

Table 4.3
Descriptive Statistics for Continuous Variables

Variable Name	Minimum	Maximum	Mean	Median	S.Dev.	Skewness	Kurtosis
DA1	0.001	0.290	0.056	0.040	0.054	1.835	7.041
DA2	0.007	1.452	0.256	0.120	0.338	2.253	7.772
BDSIZE	4.000	13.000	7.474	7.000	1.880	0.729	3.425
BDIND	0.250	0.800	0.452	0.429	0.122	0.753	3.188
BDEXPERT	0.100	0.800	0.335	0.333	0.154	0.675	3.066
BDMEET	2.000	14.000	5.349	5.000	1.866	2.195	9.334
BDSCORE	0.000	4.000	1.500	1.000	1.142	0.389	2.328
ACSIZE	3.000	5.000	3.237	3.000	0.473	1.819	5.469
ACIND	0.667	1.000	0.885	1.000	0.150	-0.585	1.426
ACEXPERT	0.200	1.000	0.475	0.333	0.202	0.913	3.019
ACMEET	4.000	10.000	4.992	5.000	1.082	2.002	8.485
ACSCORE	0.000	5.000	1.253	1.000	1.114	0.798	3.274
IAFINV	8.923	15.607	11.408	11.127	1.350	0.805	3.431
ROA	-0.320	0.265	0.034	0.038	0.084	-0.883	6.640
LEV	0.004	1.652	0.391	0.377	0.220	0.993	5.697
OWCO	17.850	85.730	54.241	55.370	15.735	-0.162	2.322
FSIZE	10.402	17.453	12.897	12.685	1.440	0.864	3.699
SGROWTH	-0.593	1.581	0.071	0.041	0.337	1.810	9.234

Regarding audit committee (AC), the descriptive statistics indicate that the majority of the Malaysian Main Market companies have an average of 3.237 in terms of the size of AC members and 88.5% of the AC members are independent directors. Comparatively the percentage of independent directors in the current study is higher than the study by Yunos *et al.* (2010) who found 70% for the period of study from 2001 to 2007. The increase of 18.5% follows the recommendation of the revised Code on Corporate Governance (2007) to have independent directors dominate the

AC. Furthermore, the minimum value of 66.7% for audit independence indicates that the AC is dominated by independent directors. With respect to financial expertise (qualification or experience on accounting, finance and audit) on the AC, the average is 47.5%, while Yunos *et al.* (2010) reported that only 37% of ACs have financial expertise in Malaysian companies, showing an increase of about 10.5% in the AC financial expertise following the recommendation of the revised Code on Corporate Governance (2007) to have at least one member of the AC with financial expertise.

The AC in the Malaysian Main Market listed companies meets more than four times per year. This statistic indicates that the average number of meetings for the AC in the majority of companies is 4.99, as recommended by the revised Code on Corporate Governance (2007), to meet at least four times annually. The statistics in Table 4.4 also indicate that 32.3% of Malaysian companies have an AC chairman who was an audit partner (ACCHPAR). This result indicates that about one third of the AC chairman were audit partners in the Malaysian Main Market listed companies. Table 4.3 also shows that the average score for the effectiveness of the AC (ACSCORE) is 1.25 with the minimum score "0" and the maximum score "5" which indicate that the audit committee score is low effectiveness among Malaysia Listed Companies in the Main Market of Bursa Malaysia.

With respect to investment in the internal audit function (IAFINV), Table 4.3 shows that the minimum value is 8.923 (RM3,000) where the maximum value is 15.607 (RM39,000,000). The average for IAFINV is 11.408 (RM370,658). These results indicate that there is a serious trend towards IAFINV to increase EQ and enhance the quality of financial reporting in companies listed on the Malaysian Main Market. In

addition, the descriptive statistics in Table 4.4 also indicate that internal audit function sourcing arrangements (IAFSOU) in the companies listed on the Malaysian Main Market are practiced in house by 46.2% and outsourced by 53.8%.

Table 4.4
Descriptive Statistics of Dichotomous Variables

Variable Name	Observations	Frequency		Percentage	
		1	0	1	0
IAFSOU	2036	941	1,095	46.20%	53.80%
LOSS	2036	438	1,598	21.50%	78.50%
ACCHPAR	2036	658	1,378	32.30%	67.70%
BIG4	2036	1135	901	55.70%	44.30%

In terms of the control variables, Table 4.3 shows that the average firm size (FSIZE) is 12.897 and that the FSIZE of companies varies with a minimum of 10.4 and a maximum of 17.45. The sample has an average leverage (LEV) level of 39% and ROA of 3.4%. The negative sign of the ROA implies that some companies' operations resulted in a loss during the study period. Also, Table 4.3 shows that the average of sales growth is 7.0% in the Main Market of Malaysian companies and that the negative value of sales growth means that some companies revenue in the current year is less than that for the previous year. The descriptive statistics in Table 4.4 also indicate that 21.5% of Malaysian firms had net losses during the study period. In terms of the audit quality (BIG4), which represents the external audit quality, Table 4.4 shows that 1,135 firms (55.7%) are audited by Big4 audit firms while 901 firms (44.3%) are audited by non-Big4. These results indicate a trend to increase the quality of the external audit in companies listed on the Malaysian Main Market.

In terms of ownership concentration, the descriptive statistics in Table 4.3 indicate that the average ownership concentration (OWCO) is 54.24% for the largest five

shareholders in the Malaysian Main Market companies. This means that the companies listed on the Malaysian Main Market are highly ownership concentrated. This result is similar to the results found by Abdullah and Nasir (2004) and Yunos et al. (2010).

4.3 Diagnostic Test

Before running the multiple regression analysis, several assumptions should be met. These are outliers, normality, linearity, multicollinearity, heteroscedasticity and autocorrelation. All of these tests are tested accordingly.

4.3.1 Outliers Test

Outliers are observations that have big values that are largely different from other observations (Hair, Black, Babin & Tatham, 2006). Several methods are available to solve these outliers. This study uses the winsorized variables distributions following the previous studies (Ball & Shavikumar, 2005; Brown & Caylor, 2006; Cohen *et al.*, 2008; Francis *et al.*, 2004; & 2005; Gaio 2010; Ge, 2009; Kothari *et al.*, 2005; Kraft, Lee & Lopatta, 2014; Prawitt *et al.*, 2009; Saleh *et al*., 2005; Yoon *et al.*, 2006), which is one way to eliminate possible outliers. Therefore, to mitigate the influence of outliers, the continuous variables, which have extreme value (outliers), were transformed from the actual observations to normal distributions by winsorizing these variables at the minimum level percent, which is 1 percent at the top and bottom of their distributions to maintain the characteristics of the original data.

4.3.2 Normality Test

Normality, being the basic assumption in analysing data, states that variable shape and its correspondence should be distributed normally (Hair *et al.*, 1998). There are several ways in which one could distinguish the distribution that is normal. In addition, the residual that means the difference between the values observed and predicted is supposed to be distributed normally. Therefore, residual normality assumption is assessed.

The normal probability plots and histogram are used as descriptive graphical methods to test the normality assumption. In terms of residual distribution, the normal probability plots (pnorm) show the data sensitivity to non-normality in the middle range. In this test the actual data are compared with the cumulative distribution of normal distribution. Therefore, this approach is considered reliable (Hair *et al.* 2006). The normality can be seen by looking at how close the line is following the diagonal line. Based on the normality plots test, there is a minor deviation. As this study examines large number of observations, the results under this condition might not be distorted. Hair *et al.* (2006) stated that for more than 200 observations, the non-normality departure is insignificant. Furthermore, as recommended, the residual was also tested using a histogram, which is sensitive, and the graph can show information about the shape of the variables better than simple numeric statistics. The results based on this test shown in Figure 4.3 also lead to the conclusion that the dataset has no serious violation of the normality assumption; therefore, it is assumed that the data are normally distributed.

It has been argued that it is not necessary to check the normality of individual variables when the residuals meet the normality assumption (Tabachnick & Fidell, 2007). However, Skewness and Kurtosis, as descriptive numerical methods, are used to test the normality of the individual variables. Skewness refers to distribution shifting to one side while Kurtosis refers to the "peakedness" or "flatness". For Skewness, Leys, Ley, Klein, Bernard and Licata (2013), and Hair *et al.* (2006) suggested a higher threshold of ±3. For Kurtosis, Leys *et al.* (2013) suggested a higher threshold of ±10. The results of study shown in Table 4.3 lead to the conclusion that the dataset has no serious violation of the normality assumption.

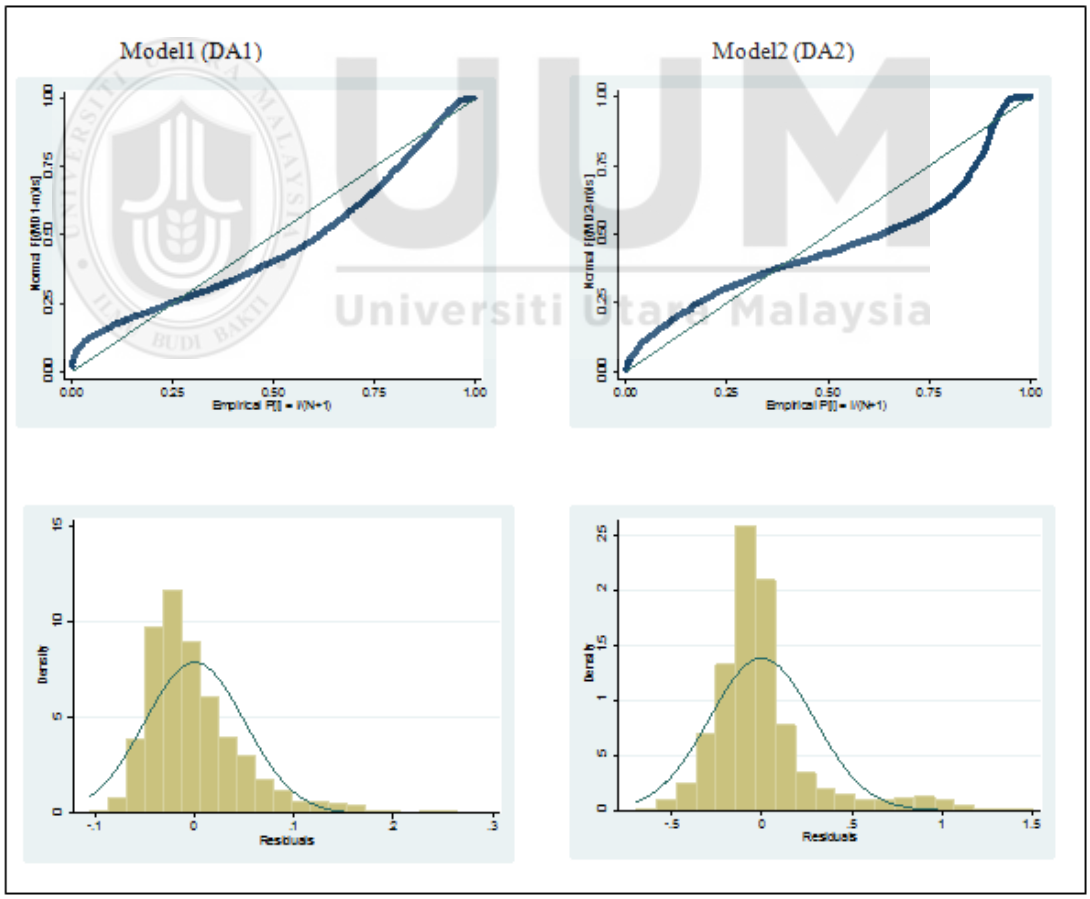

Figure 4.3
Graphical Distributions of Residuals Normality

4.3.3 Linearity Test

There is an expectation that a linear relationship has to exist between the dependent and independent variables (Cohen & Cohen, 1983). Linearity refers to the association between the change in both dependent and independents variables; in other words, it reflects the relationship between the two sets of variables (Hair et al., 1988). In order to test the linearity assumption of the regression model, a histogram of residual distribution is plotted. Such lines of distribution have to follow a normal curve (see Figure 4.3). In regression analysis, other method that can detect the linearity is calculating the standard deviation for the dependent variable and the residual where the standard deviation of dependent variable should be more than the standard deviation of residual. Table 4.5 shows that for the dependent variables' standard deviation is more than residuals' standard deviation.

Table 4.5
The Standard Deviation of Earnings Quality Measurements and the Residuals

Variable	**Std. Dev**	
	Model 1 (DA1)	Model 2 (DA2)
DA	0.054	0.338
Residuals	0.050	0.287

4.3.4 Multicollinearity Test

The multicollinearity level and the influence of the results should be investigated prior to pronouncing the regression results as valid. Multicollinearity refers to intercorrelation of the independent variables and reduces the ability to predict the measure and determine the relative role of each independent variable. A great degree of multicollinearity between independent variables leads to the unreliability of the estimated regression coefficient (Kline & Santor, 1999). The presence of multicollinearity is checked in the present study by using the correlation matrix (r)

for the bivariate analysis between the independent variables and the VIF. The rule of thumb proposed by Cohen and Cohen (1983) stated that multicollinearity may pose a problem if the correlation value in the correlation matrix constituting all independent variables is higher than 0.80.

Table 4.6 shows the dependent, independent and control variables in a correlation matrix. Overall, there are a number of statistically significant correlations between board characteristics, audit characteristics, internal audit function (IAF) and control variables. For example, there is significant correlation between board independence and AC independence, and between board financial expertise and AC expertise, because the AC is a sub-committee of the BOD, and som of the independent and financial experts on the BOD are appointed as AC members. Additionally the highest correlation (75.5%) is between investment in the IAF and firm size, which indicates that the big firms have more investment in the IAF.

Table 4.6 also reports that the highest correlation is 0.755 between FSIZE and IAFINV, followed by 0.638 between IAFINV and IAFSOU. These correlations show that large firms have a department of IAF (in-house) and invest more in the IAF. A high correlation of -0.70 was found between ROA and LOSS, because firms having high profitability (return on assets) are negatively correlated with loss. Moreover, a high correlation of -0.342 was found between ROA and LEV, indicating that firms having high profitability are negatively correlated with leverage. A high correlation of 0.268 was found between LEV and LOSS, which shows that firms leverage is positively correlated with net loss, and a high correlation of 0.571 was revealed between BDEXPERT and ACEXPERT indicating that the board members with

financial expertise are appointed on the AC. In addition, a high correlation of 0.549 was found between BDMEET and ACMEET, indicating that an increase in the frequency of board meetings leads to an increase in AC meetings. A high correlation of 0.439 was found between FSIZE and IAFSOU, indicating that large firm size has an in-house IAF. A high correlation of 0.348 was revealed between FSIZE and BIG4 evidencing that big-sized firms have high audit quality because they have been audited by BIG4 audit firms. Furthermore, a correlation of 0.251 was found between FSIZE and ACSIZE, showing that big-size firms have big ACs size.

Table 4.6 also shows that a high correlation of 0.402 was found between BDIND and ACIND. This correlation indicates that independent directors on the board are appointed on the AC. The results also showed a high correlation of 0.380 between BDSIZE and FSIZE, and a high positive correlation of 0.345 with IAFINV, which indicates that large firms have large boards, and that large boards invest more in the IAF. In addition, the correlation matrix shows a high correlation of -0.367 between BDSIZE and BDIND. This result shows that big boards of directors have fewer independent directors. The correlation is 0.291 between BDSIZE and ACSIZE, which may be attributed to the fact that the AC is a sub-committee of the BOD, which means that firms with big-sized boards also have big-sized ACs. Meanwhile, a correlation of -0.144 was found between ACSIZE and ACIND, revealing that firms with a big sized AC have less independent directors on the AC. Moreover, a high correlation of 0.285 was found between DA1 and DA2 because these DA models are extended from the modified Jones model by Dechow *et al.* (1995). However, the correlation among all the study variables is not more than 0.80. Thus, Table 4.6 indicates that there is no multicollinearity problem.

Table. 4.6

Correlations Matrix of Study Variables

#	Variabl	1	2	3	4	5	6	7	8	9	10
1	DA1	1.0000									
2	DA2	0.285***	1.0000								
3	BDSIZE	-0.0995***	-0.0987***	1.0000							
4	BDIND	0.0294	0.1127***	-0.367***	1.0000						
5	BDMEET	0.0427*	0.0551**	0.0936***	0.0772***	1.0000					
6	BDEXPERT	0.0572***	0.0430*	-0.227***	0.1090***	0.0287	1.0000				
7	ACSZIE	-0.0163	0.0135	0.291***	0.148***	0.1356***	-0.0073	1.0000			
8	ACIND	-0.0397*	0.0327	0.0994***	0.402***	-0.0339	-0.0339	-0.144***	1.0000		
9	ACMEET	-0.0093	0.0672***	0.0862***	0.0892***	0.549***	-0.0266	0.0981***	0.0458**	1.0000	
10	ACEXPERT	0.0251	-0.0242	-0.0570**	-0.0067	0.0045	0.571***	-0.140***	0.0497**	0.0129	1.0000
11	ACCHPAR	0.0483**	0.0282	-0.0634***	0.0426*	0.0817***	0.0458*	-0.0180	0.0068	0.0422**	0.1229***
12	IAFSOU	-0.0946***	-0.0413*	0.198***	0.0613***	0.0884***	-0.0363	0.166***	0.0732***	0.0937***	-0.0463**
13	IAFINV	-0.1399***	-0.0868***	0.345***	0.0015	0.253***	0.0141	0.269***	-0.0046	0.246***	-0.0580***
14	ROA	-0.229***	-0.166***	0.140***	-0.0631***	-0.154***	-0.0703***	0.1113***	-0.0110	-0.0734***	0.0089***
15	LEV	0.1047***	0.0093	0.0593***	0.0107	0.205***	0.0031	0.0376*	0.0234	0.1272***	-0.0323
16	OWCO5	-0.0268	0.0315	0.0751***	-0.1020***	0.0269	-0.0046	0.1096***	-0.1120***	0.0248	0.0074
17	FSIZE	-0.190***	-0.0497**	0.380***	-0.0036	0.235***	-0.0764***	0.251***	0.0335	0.226***	-0.1230***
18	BIG04	-0.1334***	-0.0686***	0.1176***	-0.0171	0.0804***	-0.0325	0.0957***	-0.0407*	0.0370*	-0.0513*
19	LOSS	0.250***	0.156***	-0.1287***	0.0858***	0.0993***	0.0711***	-0.0504**	0.0404*	0.0593***	-0.0039
20	SGROWTH	-0.0181	-0.0851***	0.0466**	0.0175	-0.0363*	-0.0313	0.0309	0.0447**	0.0192	0.0105

Table 4.6 (continued)

		11	12	13	14	15	16	17	18	19	20
11	ACCHPAR	1.0000									
12	IAFSOU	-0.0487**	1.0000								
13	IAFINV	-0.0393*	0.638***	1.0000							
14	ROA	0.0094	0.0821***	0.160***	1.0000						
15	LEV	-0.0021	0.0367*	0.1106***	-0.342***	1.0000					
16	OWCO5	-0.0142	0.0688***	0.1223***	0.161***	-0.140***	1.0000				
17	FSIZE	-0.0103	0.439***	0.755***	0.174***	0.178***	0.1136***	1.0000			
18	BIG04	0.0385*	0.171***	0.3168***	0.18***	-0.1271***	0.152***	0.348***	1.0000		
19	LOSS	0.0063	-0.0945***	-0.172***	-0.70***	0.268***	-0.1285***	-0.215***	-0.157***	1.0000	
20	SGROWTH	-0.0242	0.0388*	0.0318	0.184***	0.0396*	-0.0008	0.0711**	0.0120	-0.169***	1.0000

Where: *, **, *** are p-value <0.10, 0.05, and 0.01, respectively. DA1 = DA modified Jones model (Kasznik 1999), DA2= DA (Yoon et al., 2006), BDSIZE = board size, BDIND = board independence, BDMEET = board meetings, BDEXPERT = board financial expertise, ACSIZE = AC size, ACIND = AC independence, ACMEET = AC meetings, ACEXPERT= AC financial expertise, ACCHPAR = AC chairman audit partner, IAFSOU = IAF sourcing arrangement, IAFINV = investment in IAF, ROA = return on assets, LEV = leverage, OWCO = ownership concentration, FSIZE = firm size, BIG4 = external audit firms, LOSS = net loss, SGROWTH = sales growth.

Moreover, the variance inflation factor (VIF) is the second collinearity test tested between independent variables. According to Hair *et al*. (2006), an acceptance value that is greater than 0.1 or a VIF value lower than 10, are acceptable collinearity values and confirm no multicollinearity. On the other hand, a VIF value that is over 10 often indicates that multicollinearity may affect the least squares estimates. As a consequence, multicollinearity is evidenced by a high VIF value and small acceptance value. The VIF values presented in Table 4.7 show no issues of multicollinearity as they are all lower than 10.

Table 4.7
Standard Tests on VIF Results

	Collinearity Statistics	
Variable	**VIF**	**1/VIF**
ACSCORE	7.64	0.130914
ACZIE	4.74	0.211170
BDSIZE	4.17	0.239669
BDSCORE	3.64	0.274480
IAFINV	3.53	0.283525
ACEXPERT	2.99	0.334780
FSIZE	2.74	0.364651
ACCHPAR	2.37	0.422777
BDIND	2.24	0.447402
BDEXPERT	2.11	0.474300
ACMEET	2.10	0.475658
ROA	1.98	0.504469
LOSS	1.87	0.535899
BDMEET	1.81	0.553098
IAFSOU	1.77	0.565208
ACIND	1.59	0.628434
LEV	1.30	0.771264
BIG4	1.22	0.818031
OWCO	1.09	0.919475
SGROWTH	1.06	0.940066
Mean VIF	**2.60**	

4.3.5 Heteroscedasticity Test

The homoscedasticity of variance refers to the constancy of the residual in that such residuals are randomly dispersed throughout the various estimations and the existence of unequal variance – this relates to the one of the most common assumption violations in multivariate analysis, which is referred to as heteroscedasticity (Baum, 2001). To detect the problem of heteroscedasticity, the Breusch-Pagan / Cook-Weisberg test was used through the *hettest* command, which is available in STATA packages' analyses. The consistency of variance is the null hypothesis of this test. The null hypothesis will be accepted when there is a large probability. The hypothesis is rejected if the p-value exceeds 0.05. Table 4.8 shows the heteroscedasticity test with a significant p-value, indicating the existence of heteroscedasticity. Thus, the data used in this study are considered to have a heteroscedasticity problem. STATA contains options for the estimation of robust standard errors. In this regard, heteroscedasticity leads to biased standard errors, and while ordinary least squares expect errors to be independent and identically distributed, robust standard errors relax both or either of the above assumptions. The robust function also corrects the problem of bias in the standard errors, and gives estimates that are more efficient. Therefore, to solve the heteroscedasticity problem the study models run OLS regression with robust function.

Table 4.8
Heteroscedasticity Test

	chi2(1)	**Prob > chi2**
Model 1	130.84	0.0000
Model 2	870.70	0.0000

4.3.6 Autocorrelation Test

The next test is autocorrelation, or as it is also sometimes called, the correlation coefficient. The autocorrelation function can be used to answer the question of whether the sample dataset is generated from a random process. To examine the autocorrelation of the error terms, the Durbin-Watson test is applied. For detecting whether there is any autocorrelation in the dataset used, the value of the Durbin-Watson (DW) test is examined. The DW test is commonly used as a statistical method to check autocorrelation. Kazmier (1996) stated that the value of this test can range between 0 and 4.0, and is approximately 2.0 when there is no autocorrelation present.

Generally, a DW value that is less than 1.4 shows a strong positive series of correlations, whereas that which is greater than 2.6 shows a strong negative series of correlations (Kazmier, 2003). The value of DW can be seen by using the STATA program after generating the time variable (*gen time=_n*) and (*tssettime*), and regressing the model using *dwstat* to get the result for the Durbin-Watson value (*Durbin-Watson d-statistic (28, 2036) = 1.429375*). The result shows that the Durbin-Watson value is more than 1.4 and less than 2.6, which indicates that no series of autocorrelation exists between the study variables.

4.4 Regression Analysis Results

4.4.1 Results of Model One

The model was estimated with the help of Multivariate Analysis, specifically through the Ordinary Least Squares (OLS regression). The estimation was carried out using cross-sectional data for four years, where the OLS functional model determines the level of the

relationship between each independent variable with the DA as the dependent variable and a proxy for EQ.

After the assumptions of regression were met, in this section, an analysis of the relationship between EQ as the dependent variable; and board of directors' characteristics, AC characteristics, IAF as the independent variables; and firm size, leverage, ROA, sales growth, audit quality (BIG4), loss and ownership concentration as control variables, is conducted using the multiple regression technique. The outputs for the multiple regression are shown in Table 4.9.

Table 4.9 shows the multiple regression results for Model one using robust pooled cross-sectional data analysis estimation to examine the relationship between the dependent variables DA1 (absolute value of DA using modified Jones model by Kasznik (1999)) and DA2 (absolute value of DA using extended of modified Jones model by Yoon *et al.* (2006)) and the independent variables and control variables. For the first dependent variable (DA1) the model is fit and significant at the 1% level with the F-value = 8.08, R^2 = 0.1214, and for the second dependent variable (DA2) the model is also fit and significant at the 1% level with the F-value = 18.1, R^2 = 0.2698. The study sample for both models is 2036 firms' observations during the period from 2009 to 2012 among seven industries (construction, consumer product, plantation and mining, properties, trading and services, industrial product and technology). The following section explains the relationship of the independent and control variables with the dependent variables based on Table 4.9.

Table 4.9

Model One: Multiple Regression Results

$|DA| = \beta_0 + \beta_1$ BDSIZE + β_2 BDIND + β_3 BDEXPERT + β_4 BODMEET + β_5 IAFINV + β_6 IAFSOU + β_7 ACSIZE + β_8 ACIND + β_9 ACEXPERT + β_{10} ACCHPAR + β_{11}ACMEET + β_{12} FSIZE + β_{13} ROA + β_{14} LEV+ β_{15} BIG4+ β_{16} OWCO + β_{17} LOSS + β_{18}SGROWTH + β_{19}YEARS + β_{20}INDUSTRIES + e.

	Predicted	DA1		DA2	
Variables	**Sign**	**Coef.**	**t-stat.**	**Coef.**	**t-stat.**
_cons	+/-	0.10366***	6.45	0.19525**	2.32
BDSIZE	-	-0.00015	-0.19	-0.00852*	-1.78
BDIND	-	0.00912	0.66	0.19623**	2.30
BDEXPERT	-	0.00783	0.82	0.14776***	2.61
BDMEET	-	0.00100	1.30	0.00661	1.40
IAFINV	-	0.00068	0.42	-0.0348***	-3.52
IAFSOU	+/-	-0.00193	-0.64	0.03337*	1.88
ACSIZE	-	0.00277	0.95	0.00729	0.41
ACIND	-	-0.01287	-1.39	0.00337	0.07
ACEXPERT	-	-0.002659	-0.36	-0.10702***	-2.64
ACCHPAR	-	0.00528**	2.09	0.01666	1.17
ACMEET	-	-0.00104	-0.86	0.01733**	2.24
FSIZE	-	-0.00474***	-3.44	0.00947	1.21
ROA	-	-0.08978**	-2.48	-0.58418***	-3.39
LEV	+	0.00892	1.30	0.00069	0.02
BIG4	-	-0.00440*	-1.71	-0.01707	-1.14
OWCO	+	0.00010	1.35	0.00038	0.91
LOSS	+	0.01308***	2.84	0.04329	1.58
SGROWTH	+	0.00727*	1.71	-0.04247*	-1.66
Y2010	+/-	-0.00679**	-2.11	0.00332	0.18
Y2011	+/-	-0.00644**	-2.04	0.00567	0.31
Y2012	+/-	0.00137	0.40	0.01883	1.00
Construction	+/-	-0.00239	-0.50	0.05702**	2.36
Consumer	+/-	0.00205	0.55	0.40359***	16.31
Plantation	+/-	-0.01217***	-2.82	0.33773***	9.65
Properties	+/-	-0.00678	-1.64	0.26343***	8.63
Technology	+/-	0.00918	1.30	0.02311	0.84
Trade & Services	+/-	-0.00298	-0.91	0.07330***	4.79
F-value		8.08		18.1	
Sig		0.000		0.000	
R^2		0.1214		0.2698	
N		2036		2036	

Where: *, **, *** are p-value < .10, .05, .01, respectively, DA1 = DA modified Jones model (Kasznik, 1999), DA2 = DA (Yoon *et al.*, 2006), BDSIZE = board size, BDIND = board independence, BDEXPERT = board financial expertise, BDMEET = board meetings, IAFINV = investment in IAF, IAFSOU = IAF sourcing arrangement, ACSIZE = AC size, ACIND = AC independent, ACMEET = AC meeting, ACEXPERT = AC financial expertise, ACCHPAR = AC chairman audit partner, FSIZE = firm size, ROA = return on assets, LEV = leverage, BIG4 = audit quality, OWCO = ownership concentration, LOSS = net loss, SGROWTH = sales growth.

4.4.1.1 Board Size

As shown in Table 4.9, there is a negative but insignificant relationship between board size (BDSIZE) and DA based on the Modified Jones Model (Kasznik, 1999). The insignificantly negative coefficient and t-value (t= -0.19, p> 0.10) indicates that the level of DA1 is not significantly related to board size. Hence, the result is contradictory to H_1, which predicted that as the number of directors increases the level of DA will decrease. A similar finding was reported by Saleh *et al.* (2005). Similarly, the findings of this study are also consistent with the results of Mohamad *et al.* (2012), and Buniamin *el al.* (2012) who also found that board size does not have a significant relationship with DA among Government Linked Companies in Malaysia. Furthermore, this finding is in line with Abdul Rahman and Ali (2006) who found an insignificant relationship between board size and DA among the 100 top companies listed on the Main Market of Bursa Malaysia.

In model (DA2), the relationship is found to be negative and significant at the 10% level (t= -1.780, p < 0.10). The result supports H_1, which indicates that a higher number of members on the BOD leads to a decrease in the level of DA, and, eventually, to higher EQ. This finding provides support for the argument of the resources dependence theory, which posits that a large number of directors bring more experience and resources, which significantly enhances board effectiveness (Fama & Jensen, 1983; Pfeffer & Salancik, 2003). This result is similar to previous studies by Xie *et al.* (2003), Ye (2014), Uwuigbe *et al.* (2014), and Bradbury *et al.* (2006) who argued that larger boards have the ability to monitor the top management actions, thus increasing the EQ. This result is supported by Ismail *et al*. (2010) who found that the size of the board and DA (measuered by Modified Jones Model of

Kasznik, (1999) and Dechow *et al.* (1995)) are negatively correlated with significant relationship.

4.4.1.2 Board Independence

Table 4.9 shows that the relationship between the percentage of independent directors on the board (BDIND) and DA1 is positive but insignificant ($t = 0.66$, $p > 0.10$). Hence, the result rejects H_2, which predicted that as the proportion of independent directors increases the level of DA decreases. The finding is similar to those reported by previous studies who found an insignificant effect of the board of directors' independence on EM (Abdul Rahman & Ali, 2006; Abdullah, 2004; Adiguzd, 2013; Buniamin *et al.*, 2012; Hashim & Devi, 2007; Ismail *et al.*, 2010; Mohamad *et al.*, 2012; Saleh *et al.*, 2005; Siregar & Utama, 2008; Ye, 2014).

With regard to DA2, Table 4.9 presents a significant and positive association between board independence and DA, where the t-statistic value ($t = 2.30$, $p < 0.05$) indicates that increased directors' independence leads to an increased level of DA and decreased quality of earnings. In other words, H_2 is rejected. This result does not support the arguments of the agency theory and resource dependence theory, which claim that outside directors significantly contribute to enhancing board effectiveness, increasing the quality of financial reporting and reducing the agency problem (Fama & Jensen, 1983; Pfeffer & Salancik, 2003). Prior studies (e.g. Abdullah, 2004; Abdul Rahman & Mohamed Ali, 2006) explained that the domination and control of management over the board prevents the independent directors' ability to conduct their monitoring responsibilities. Thus, owing to the fact that the director selection process is dominated by the CEO, the independent directors are incapable of

carrying out independent decisions and of maintaining their independence (Abdullah, 2004).

Perhaps, the most important issue addressed by Abdul Rahman and Ali (2006), and Hashim and Devi (2007) is domination of the managerial directors on the board in Malaysian companies, which raises questions about responsibility and the quality of independent directors. This is because the firms' independent directors are not in fact independent of management, also, when these directors possess less financial expertise, they fail to understand financial reporting information, which explains their insignificant findings regarding the association between board independence and EQ.

4.4.1.3 Board Financial Expertise

The results in Table 4.9 indicate that board financial expertise (BDEXPERT) is not significantly related to DA1 ($t = 0.820$, $p > 0.10$). Thus, H_3 is rejected. The finding of this study does not support the agency theory and resource dependence theory, which suggests that high board financial expertise, is important to enhance the board monitoring as it leads to high financial reporting quality (Pfeffer & Salancik 2003).

For DA2, the result in Table 4.9 shows a significantly positive relationship between board financial expertise and DA2 ($t = 2.61$, $p < 0.01$). This result indicates that the increase in the financial expertise for the members of BOD increases DA2 (low EQ)[9]. Thus, H_3 is rejected. A possible explanation for this result is that the increase

[9] To avoid the correlation effect between BODEXPERT and ACEXPERT, a multiple regressions is made separately for the BODEXPERT and ACEXPERT with control variables. The results are similar to the findings reported in table 4.9 for both DA1 and DA2 (see Appendix: B).

in the board financial expertise is attributed to the firms following the recommendations of the Malaysian Code on Corporate Governance. Furthermore, the effect of high ownership concentration and information asymmetry leads to no effect on the advantage of this expertise on the board, which turns to failure to detect EM (Park & Shin, 2004). Added to this, the monitoring responsibility of the BOD is delegated to the ACs (important board committee), as it is part of their responsibility of discerning the firm's financial status (McMullen, 1996; Beasley *et al*., 2009).

4.4.1.4 Board Meetings

The results of this study show that the frequency of the board of directors meetings (BDMEET) is not significantly related to both DA1 and DA2. Thus, H_4 is rejected. This result is consistent with Adiguzel (2013), Mohamad *et al.* (2012), and Buniamin *el al.* (2012). A possible explanation is that even though the frequency of board meetings is one of the determinants of the effectiveness of BOD, features, such as the highly concentrated ownership in Malaysian companies, weak BOD and high information asymmetry (Abdul Rahman & Ali, 2006; Fan & Wong 2002, Nam & Nam, 2004; Radzi *et al.*, 2011), and because outside directors who are always less knowledgeable about company operations than their executive colleagues, BDMEET is not significant.

4.4.1.5 Investment in Internal Audit Function

Table 4.9 shows a positively insignificant relationship between the cost of the IAF (IAFINV) and DA1, with t-value ($t = 0.42$, $p > 0.10$). While, in the relationship with DA2, Table 4.9 indicates a significantly negative association between the cost of the IAF and DA2 at the 1% level ($t = -3.52$, $p<0.01$). This indicates that an increase in

the cost of IAFs decreases the EM (higher EQ). Thus, H_6 is supported. This result indicates that the investment in the IAF is an effective source to enhance internal monitoring, which leads to a reduction in EM. This result is consistent with the agency and resource dependent theories. This result is also similar to the result of Johl *et al.* (2013) who found that the investment in IAF is associated with lower DA.

4.4.1.6 Internal Audit Function Sourcing Arrangements

Table 4.9 shows an insignificant negative association between sourcing arrangements (in-house) (IAFSOU) and DA1, t-value (t = -0.64, > p 0.10). In terms of the association with DA2, Table 4.9 shows the t-statistic (t = 1.88, p< 0.10) significantly positive at the 10% level. Thus, H_7 is accepted. The explanation of this result is the in-house IAF significant to increasing the level of DA. This result is consistent with the results of Ahlawat and Lowe (2004) who suggested that an out-sourced IAF is more purposeful compared with an in-house IAF. However, this result is inconsistent with Mansor *et al.* (2013) who found that the in-house IAF is related to lower DA in Malaysia.

In addition, Johl *et al.* (2013) found that the IAF by external auditors (outsource) is perhaps highly independent, and, therefore may be able to carry out an effective monitoring role. In addition, Desai *et al.* (2011) found that outsourcing the IAF has higher quality than in-house IAF. Also, Glover *et al.* (2008) argued that the external auditors have a greater tendency to rely on the out-sourced work relative to the in-house internal auditors when there is high intrinsic risk. This result also, support that the advantages provides related to outsourcing of IAF like specialized knowledge

access and higher objectivity, as such internal auditors are not susceptible to management pressure.

4.4.1.7 Audit Committee Size

Table 4.9 shows that the relationship between AC size (ACSIZE) and DA in both DA1 and DA2 is not significant, with t-value ($t = 0.95$, $p > 0.10$) and ($t = 0.41$, $p > 0.10$), respectively. This result may not support the argument of the resource dependence theory that a large size of AC significantly enhances the financial reporting quality. Thus, H_8 is rejected. This result is consistent with the prior research by Adiguzel (2013) that insignificant relationship between AC size and EM. This result is also similar to previous studies, such as Baxter and Cotter (2009), Bedard *et al.* (2004), Davidson *et al.* (2005), Salleh and Haat (2014), Soliman and Ragab (2014), and Xie *et al.* (2003).

4.4.1.8 Audit Committee Independence

Table 4.9 shows that the percentage of audit committee independence (ACIND) is not significantly related to EQ with both measurements DA1 and DA2, where the t-value is ($t = -1.39$, $p > 0.10$) and ($t = 0.07$, $p > 0.10$), respectively. This implies that the ACs' independence monitoring role to monitor the financial reporting process is not enough to enhance EQ. This suggests that independent directors on the AC are ineffective. Thus, H_{11} is rejected. This result is consistent with Abdul Rahman and Ali (2006), Adiguzel (2013), Garcia *et al.* (2010), Ismail *et al.* (2010), Mohamad *et al.* (2012), Soliman & Ragab (2014), and Yusof (2010).

The possible explanation for this result can be explained in two different perspectives in relation to EQ similar to the explanations of Yusof (2010). First, this finding is ambiguous as the ACs' independent directors are often independent directors on the board. The finding might be justified by the nature of the job undertaken by the independent directors in terms of the committee they serve. On the basis of Pomeroy and Thorton's (2008) findings, the AC's independent directors are only effective in enhancing the quality of audit but fail in enhancing the quality of the financial statement. Therefore, it can be stated that the AC's independent directors do not justify the variations in the level of DA. Nevertheless, on the basis of responsibility, the AC directors have broader roles in the business operation (monitoring the financial reporting). Second, the AC independent directors do not have more knowledge and access to the financial process regarding the company like the executive managers, which may result in increased DA (decreased EQ).

4.4.1.9 Audit Committee Financial Expertise

Table 4.9 indicates that the AC financial expertise (ACEXPERT) is not significantly related to DA1, with t-value of ($t = -0.36$, $p > 0.10$). The result is similar to other studies by Mohamad *et al.* (2012), and Salleh and Haat (2014) who also found no association between the financial expertise of the AC and DA in Malaysia.

In terms of second EQ measurement DA2, Table 4.9 shows that ACEXPERT is negatively significant with t-value ($t = -2.64$, $p < 0.01$), which supports H_{14}. The result evidences the premise that the existence of financial experts on the AC has a key role in enhancing the monitoring role of the committee and in lessening the practice of EM. This result is supported by prior studies that investigated the effect

of AC financial expertise on EM, which include Badolato *et al.* (2013), Badolato *et al.* (2014), Baxter and Cotter (2009), Bedard *et al.* (2004), Carcello *et al.* (2006), He & Yang (2014), Nelson and Devi (2013), Saleh *et al.* (2007), Xie *et al.* (2003), and Yusof (2010).

4.4.1.10 Audit Committee's Chairman Audit Partner

Regarding the relationship between AC chairman audit partner (ACCHPAR) and EQ, Table 4.9 shows the t-value (t = 2.09, < p 0.05) and that the coefficient is significantly positive, indicating that the DA1 increase in the companies that have AC chairman as audit partner. This result is in line with Yosef (2010) who justified that the former senior auditor on AC may exert some influence on incumbent auditors at constraining accruals. This means that having a former senior auditor on the AC is associated with larger accruals. He also argued that perhaps those former senior auditors on ACs are attracted to firms that share some characteristics that are also associated with high accruals.

Menon and Williams (2004) also mentioned that firms having a former audit partner as officers or directors are associated with larger accruals suggesting a potential threat on audit independence. In addition, Radzi *et al.* (2010) found a similar result for the relationship between former senior auditor and former CFOs and DA. He suggested that this is because firm's directors do not have similar cannot access to financial information as that of the executive directors, and, hence, are handicapped and limited to the available resources that may not be effective in monitoring DA. Other explanation supported by the study of (Naiker et al 2013) that the presence of an audit partner on the audit committee presents another potential threat to auditor

independence because an audit partner serving on a client's audit committee could affect the audit quality. In terms of the relationship with DA2, Table 4.9 shows that the coefficient is insignificant with a t-value of 1.17, and p> 0.10. Thus, H_{17} is rejected.

4.4.1.11 Audit Committee Meetings

The association between the frequency of audit committee meetings (ACDMEET) and DA1 is shown in Table 4.9 with t-value (t = -0.86, P > 0.10). This shows that the coefficient is insignificant with a negative relationship. This result does not support the argument that an increase in the number of ACs meetings is related to reduced EM and enhanced financial reporting quality. Thus H_{20} is rejected. This result is similar to that of Abdul Rahman and Ali (2006), Davidson *et al.* (2005), Baxter and Cotter (2009), and Soliman and Ragab (2014) who reported that the association between the frequency of AC meetings and DA is not significant.

In terms of DA2, the relationship has a t-value (t = 2.24, P < 0.05). This means there is a significant and positive relationship between ACMEET and DA. This result does not support H_{20}, which proposed that an increase in ACMEET reduces the level of DA. Also, this result is in contrast with the arguments of the agency and resource dependence theory that the increasing AC meeting enhances the internal monitoring and increases the transparency of financial reporting by exploitation of the directors' expertise during AC meetings. Thus, H_{20} is rejected.

The result of ACMEET might have another explanation. The formal AC meetings might not be a good measure of the AC's diligence and activity. This result is in line

with the previous justifications in this and other studies that neither board meetings nor non-executive directors' and personal meetings show a significant effect on EM (Gendron & Bedard, 2006). In addition, Turley and Zaman (2004) found that AC members through informal meetings with the auditors might influence governance outcomes.

4.4.1.12 Control Variables

In relation to the control variables, the relationship between ROA is significantly negative with both DA1 and DA2 at the 5% level ($t = -2.4$, $p < 0.05$) and 1% level ($t = -3.39$, $p<0.01$), respectively. This finding shows that firms having the characteristics of low performance have a tendency to take part in EM. This result is consistent with Razak and Palahuddin (2014) who examined the Malaysian firms after implementation of revision MCCG 2007 and inconsistent with Abdul Rahman and Ali (2006) and Saleh et al. (2007) studies who examined Malaysian firms before implementation of revision MCCG 2007. The inconsistent findings in the Malaysian context might be due to the type of earnings management whether it is income increasing or income decreasing. Prawitt et al. (2009) who found that ROA is positively significant relationship with income increasing earnings management and negatively significant relationship with income decreasing earnings management in U.S firms. In this study, additional analysis is made to examine the relationship between ROA and DA. Table 4.16 shows that ROA is positively significant relation with income increasing earnings management and negatively significant relation with income decreasing earnings management. However, the coefficient of ROA in income decreasing is higher than income decreasing which might lead to get a positive relationship when absolute value for DA1 and DA2 are used.

Meanwhile, this study examines whether firms that have higher leverage have more motivation to manipulate earnings in order to avoid debt covenant violation. The leverage (LEV) coefficient is insignificantly positive with both DA1 and DA2 at the 5% level (t= 1.3, p > 0.10) and (t = 0.02, p> 0.10), respectively. This is similar to the results of Puat Nelson and Devi (2013) who found an insignificant positive relationship between LEV and DA measured by Kothari *et al.* (2005), and another study among Malaysian companies done by Abdul Rahman and Ali (2006). However, the studies of Klein (2002), and Davidson *et al.* (2005) showed that leverage has a significant positive relation with EM activities.

Firm size (FSIZE) has a negative significant association with DA1; t-value is significant al the 1% level (t = -3.44, p< 0.01). This result indicates that large firms report higher quality of earnings since they closely monitor the financial process; this finding is similar to previous studies (Abdul Rahman & Ali., 2006; Mansor *et al.*, 2013; Saleh *et al.*, 2005; Saleh *et al.*, 2007; Yusof, 2010). However, in relation to DA2, Table 4.9 shows an insignificant positive relationship between FSIZE and DA2; t-value (t = 1.21, p >0.10). A similar result was found by Johl *et al.* (2013) and Bekiris & Doukakis (2011). The possible explanation of the insignificant relationship between FSIZE, LEV and DA2, is because these control variables are scaled by total assets whereas the variables used to calculate the DA2 model are scaled by total revenue.[10]

[10]See Table A1 in appendix A, which shows the repeat of the basic model regression with DA2 using scaled by total assets to calculate DA2 rather than total revenue. The results show the significant relationship between FSIZE, LEV and DA2.

Table 4.8 shows the significant negative association between audit quality (BIG4) and DA1 at the 10% level (t = -1.71, p<0.10). The expectation is that because of the higher expertise and resources the BIG4 have relative to the non-BIG4, it will affect earnings positively with respect to EM activity detection (Davidson *et al.*, 2005). This finding is similar to the results of Rusmin *et al.* (2014), and Ye (2014). In terms of the relationship between BIG4 and DA2 the coefficient is negatively insignificant (t = -1.14, p> 0.10). While, Yusof (2010) and Abdul Rahman and Ali (2006), and Zeng (2014) found an insignificant positive relationship between audit quality (Big4) and DA. Ownership concentration (OWCO) is found to have an insignificant positive association with DA1 and DA2; t-value (t = 1.35, p> 0.10) and (t = 0.91, p> 0.10), respectively.

Table 4.9 shows that the coefficient of LOSS has a significant and positive association with DA1 at the 1% level, where the t-value is (t = 2.84, p< 0.01). The result is similar to the study done by Zeng (2014). However, the coefficient of LOSS is not significant and there is a positive association with DA2, where the t-value is (t = 1.58, p> 0.10).

The coefficient of sales growth (SGROWTH) shown in Table 4.9 is positively significant with DA1 at the 10% level (t = 1.71, p< 0.10). This result is consistent with Warfield *et al*. (1995) who indicated that the increase in the growth of sales leads to an increase in DA. However, some previous studies in Malaysia by Abdul Rahman and Ali (2006), and Johl *et al.* (2013) found a positive insignificant association between sales growth and DA. Also, Table 4.9 shows a negative

significant relationship between DA2 and sales growth, at the 10% level (t = -1.66, p < 0.10). This result indicates that the high sales growth is related to less DA[11].

Additionally, the dummy variables for years and industries are included in the regression. Table 4.9 shows that the coefficient of (Y2010) and (Y2011) are significantly and negatively associated with DA1, and that the coefficient of year (2012) is not significant with DA1. However, the coefficient for the 'all years' dummy is not significant with DA2. In terms of industry, the coefficients of all the study industries are significant and positively associated with DA2 except for the technology sector, which is insignificant. While the coefficients of all study industries have an insignificant relationship with DA1, except for the plantation sector, which is significant and negatively related.

4.4.2 Results of Model Two

In this section the analysis of the relationship between EQ as the dependent variable and the independent variables; namely, board of directors' effectiveness (score of BDSIZE, BDIND, BDMEET, BDEXPERT), and ACs' effectiveness (score of ACSIZE, ACIND, ACMEET, ACEXPERT, ACCHPAR) are examined to test if there is an aggregated effect of these characteristics on EQ. This method is based on the idea that the impact of internal governance mechanisms on corporate earnings is complementary, as an increase (decrease) in the characteristics that enhance the board and AC effectiveness lead to an increase (decrease) in the level of EQ.

[11] Sales growth found negative relationship with current accruals by Yoon model which scaled by total sales/revenue, however, when Yoon model scaled by lagged total assets the sales growth found positively with DA by Yoon model (see appendix A)

In addition, this method is based on the idea that the effectiveness of corporate governance may be achieved via different channels and that a particular mechanism's effectiveness may depend on the of other mechanisms' effectiveness (Davis & Useem, 2002; Rediker & Seth, 1995). Similarly, O'Sullivan *et al*. (2008) argued that investigating the corporate governance mechanisms as a score provides a more accurate measurement than examining them separately. In addition, in this section, the relationship between EQ and IAF (cost and sourcing arrangements) as independent variables, and firm size, leverage, ROA, sales growth, audit quality, loss and ownership concentration as control variables are analysed using a multiple regression technique. The outputs of multiple regressions are shown in Table 4.10.

As discussed in Chapter Three, the score construction adopted here is similar to that used by Brown and Caylor (2006), Cassel *et al.* (2012), Goh (2009), Hanlon *et al*. (2003) and Johl *et al*. (2013), who aggregated the number of characteristics of corporate governance to produce an aggregate corporate governance. Following the same logic, this study examines the characteristics of BOD altogether, and AC altogether, to capture their aggregate relationship within firms, to determine whether they are associated with the quality of earnings.

Table 4.10 shows that for the first dependent variable, DA1, the model is fit and significant at the 1% level (F-value = 10.58, R^2 = 0.1176) and for the second dependent variable, DA2, the model is also fit and significant at the 1% level (F-value = 21.10, R^2 = 0.2497). The explanations of the relationship between the independent variables and dependent variables are given in the following sub-sections.

Table 4.10
Model Two: Multiple Regression Results

$|DA| = \beta_0 + \beta_1 BDSCORE + \beta_2 ACSCORE + \beta_3 IAFINV + \beta_4 IAFSOU + \beta_5 FSIZE + + \beta_6 LEV + \beta_7 ROA + \beta_8 BIG4 + \beta_9 OWCO + \beta_{10} LOSS + \beta_{11} SGROWTH + \beta_{12} YEARS + \beta_{13} INDUSTRIES + e.$

Variables	Predicted Sign	DA1 Coef.	DA1 t-stat.	DA2 Coef.	DA2 t-stat.
_cons	+/-	0.10637***	7.93	0.33723***	4.170
BDSCORE	-	0.00091	0.76	0.00005	0.01
ACSCORE	-	0.00193*	1.70	0.01434**	2.10
IAFINV	-	0.00063	0.38	-0.03183***	-3.12
IAFSOU	+/-	-0.00251	-0.84	0.03083*	1.69
FSIZE	-	-0.00495***	-3.72	0.00807	1.05
LEV	+	0.00936	1.37	0.00843	0.21
ROA	-	-0.09314***	-2.60	-0.64369***	-3.75
BIG4	-	-0.00368	-1.44	-0.01561	-1.03
OWCO	+	0.00012	1.51	0.00024	0.57
LOSS	+	0.01282***	2.76	0.05291*	1.91
SGRWTH	+	0.00651	1.53	-0.04401*	-1.70
YEARS	+/-	Included		Included	
INDUSTRIES	+/-	Included		Included	
F-value		10.58		21.10	
Sig		0.000		0.000	
R^2		0.1176		0.2497	
N		2036		2036	

Where: *, **, *** = p-value < .10, .05, .01, respectively, DA1 = DA modified Jones model (Kasznik, 1999), DA2= DA (Yoon *et al.*, 2006), BDSCORE = the score is composited from the sum of BDSIZE, BDIND, BDEXPERT and BDMEET, ACSCORE = the score is composited from the sum of ACSIZE, ACIND, ACEXPERT, ACCHPAR and ACMEET, ,IAFINV = investment in IAF, IAFSOU = IAF sourcing arrangements, FSIZE = firm size, LEV = leverage, ROA = return on assets, OWCO = ownership concentration, BIG4 = audit quality, LOSS = net loss, SGROWTH = sales growth.

4.4.2.1 Board of Directors' Effectiveness

Table 4.10 shows that the coefficient of board of directors' effectiveness (BDSCORE) is positively related with DA1 and DA2 but that the relationship is not significant, t-values are (t = 0.76, p>0.10) and (t = 0.01, p>0.10), respectively. This result suggests that there is no association between the effectiveness of the BOD and EQ. Thus, hypotheses H_5 is rejected, which indicates that the board of directors effectiveness, as a controlling and monitoring function, has no impact on the EQ in the companies listed on the Malaysian Main Market. A similar result found by Johl

et al. (2013)[12]. This result does not support the features of the BOD by employing integration of the agency theory and resource dependence theory. The possible explanation that has been previously mentioned is that the BOD delegates the oversight roles of financial reporting quality responsibility to the AC, which is responsible for firm financial reporting quality (McMullen, 1996; Beasley *et al*., 2009).

Another possible explanation is that the dominance of limited numbers of majority shareholders, which are mostly affected by political relations and family involvement lead to weak board effectiveness and the ability to achieve its governance role in monitoring, controlling and addressing the agency problems. Therefore, a company's BOD is hindered and board' members are not free in terms of performing duties efficiently (Lin *et al.*, 2003).

4.4.2.2 Audit Committee Effectiveness

For audit committee effectiveness (ACSCORE), the coefficient is positive for both DA1 and DA2 and significant at (1.7, $p< 0.10$) and (2.1, $p< 0.05$), respectively. This suggests that increasing the ACSCORE leads to more EM and a decrease in EQ. Thus, hypothesis H_{23} is rejected. This result is in contrast with the result of Hunton *et al.* (2011), which found that AC score (size, meetings and expertise) is negatively significant with DA in the US. The possible explanation of this result is because almost all of the AC characteristics shown in Table 4.9 are insignificant (ACSIZE, ACIND, ACMEET, ACEXPERT) and the ACCHPAR has a positive significant relationship with DA1 at the 5% level, which leads to a significant and positive

[12]By yearly multiple regression the result of Board Score in year 2010 found insignificant and negative related to DA, as a similar result was found by Johl et al. (2013) (see Appendix D).

coefficient relationship with DA1 in the AC at the aggregate level. In addition, the result in model one (Table 4.9) shows that only ACEXPERT is significant with a negative association with DA2 and almost all the AC characteristics (ACSIZE, ACIND, ACCHPAR) are positively related and insignificant. Also, only ACMEET is significant and positively related to DA2, which leads to a significant and positive coefficient relationship at the 10% level with DA2 for the AC at the aggregate level. Another explanation for this result is the high ownership concentration, which generally takes over the decision-making, and, hence, affects the monitoring needs and the quality of financial reporting.

In terms of the IAF sourcing arrangements (IAFSOU), the relationship with DA1 and DA2 is similar to Model 1. Also, Table 4.10 shows no change in the relationship between investment in the IAF (IAFINV) and both measurements of DA (DA1 and DA2). In terms of the control variables, the results of the multiple regression are similar to the results of Model One, except for variables LOSS, SGROWTH and BIG4. The relationship between LOSS and DA2 changes from positive and insignificant in Model 1 to positive and significant at the 10% level in Model 2; t-value is ($t = 1.91$, $p < 0.10$). The sales growth (SGROWTH) association with DA1 changes from positive and significant at the 10% level in Model one to positive and insignificant in Model 2; t-value is (1.53, $p > 0.10$). Also, the coefficient of audit quality (BIG4) association with DA1 changes from negative and significant to negative and insignificant.

4.4.3 Hierarchical Regression Results

Previously it was mentioned that for the oversight role, the BOD delegates the responsibility to the AC, because AC is responsible for reporting the financial status of the firms (McMullen, 1996; Beasley *et al.*, 2009). In addition, the Malaysian Revised Code on Corporate Governance (MCCG 2007) declared that the duty of internal auditors' choices under the responsibility of the AC is to ensure effectiveness in monitoring. The head of the internal audit department needs to submit the IAF reports to the AC and have regular meetings with the AC. Thus, the effectiveness of the IAF is commonly a reflection of the effectiveness of the AC. Therefore, this section examines the moderating effect of AC effectiveness (ACSIZE, ACIND, ACMEET, ACEXPERT and ACCHPAR) on the relationship between IAF (IAFINV and IAFOUS) and EQ. This will provide answers to the fourth research objective of this study.

In order to test the effect of AC characteristics as moderators on the relationship between the IAF and EQ, hierarchical regression is used. This regression has been suggested by many authors as being a commonly used technique in identifying the moderating effects (Aguinis, 1995; Auh & Menguc, 2005; Baron & Kenny, 1986; Frazier, Tix & Barron, 2004). According to Baron and Kenny (1986), hierarchical regression is suggested as being an appropriate method for determining the moderating effect of a quantitative variable on the relationship between other quantitative variables. According to Frazier *et al.* (2004), hierarchical regression analysis is a straightforward procedure in testing the hypotheses of the moderating effect.

According to West, Aiken and Krull (1996), to detect the moderator effects, the interaction terms must be created. The interaction term is the product of multiplying the predictor variable with the moderator variable. After the interaction terms have been created, everything should be in place to structure a hierarchical multiple regression equation using STATA to test moderator effects. To do this, variables are entered into the regression equation through four steps. Control variables are tested in the first step; the independent variables are tested in the second step; in the third step, the moderating variables are tested; in the final step, the interaction terms of the independent variables and moderating variable are tested. The steps used are in accordance with the suggestions by Baron and Kenny (1986), and Frazier *et al.* (2004). Only the changes in R^2 would indicate that there is a significant moderator (Hair *et al.*, 2006).

As shown in Table 4.11 and Table 4.12, when the firm size, leverage and ROA, audit quality, ownership concentration, LOSS and sales growth are entered as control variables into the regression model, in the first step, the R^2 was found to be 0.1148 and 0.2434 in DA1 and DA2, respectively, indicating that these values of R^2 of the level of DA (DA1 and DA2) can be explained by the firm size, leverage and ROA, audit quality, ownership concentration, LOSS and sales growth. Step 2, by adding the independent variables, the R^2 increased to 0.117 and 0.265 in DA1 and DA2, respectively. This R^2 change (0.0022) with DA1 and (0.0216) with DA2 is significant. This implies that an additional increase of (0.0022) with DA1 and (0.0216) with DA2 percent of variation in DA is explained by the IAF (cost of IAF and sourcing arrangement) and board of directors characteristics (BDSIZE, BDIND, BDMEET and BDEXPERT).

In step 3, Table 4.11 and Table 4.12 also show that by adding AC characteristics (ACSIZE, ACIND, ACMEET, ACEXPERT and ACCHPAR), R^2 increased by 0.0044 in model DA1 and R^2 is significantly changed by 0.0048 in model DA2. This result indicates that AC characteristics have a major effect on EQ. In the final step (step 4) when the interaction was entered, R^2 increased from 0.1214 to 0.1251 in model DA1 and R^2 increased from 0.2698 to 0.2787 in model DA2. The R^2 changes of (0.0037) in DA1 and (0.0089) in DA2 are significant. This indicates that the AC characteristics affect the relationship between the IAF and both discretionary accrual measurements (DA1 and DA2).

The results in Table 4.12 show that the relationship of the control variables in the interaction step is similar to the results of the previous steps except for sales growth in model DA2, which changes from significant and negative at the 10% level to insignificantly negative. In terms of the independent variables, Table 4.12 indicates that the relationships found in the interaction step are similar to the results of the previous step except the coefficient of BDSIZE with DA2 where it changes from significant and negative at the 10% level to insignificantly negative, the coefficients of BDEXPRT also change from significantly positive at the 1% level to significantly positive at the 5% level association with DA2. In addition, the IAFSOU coefficient changes from a significantly positive association to insignificant with DA2, and the IAFINV coefficient changes from significantly negative at the 1% level to an insignificant and positive relationship with DA2. Hence, these changes explain the interaction effect of AC characteristics and IAF attributes on EQ.

Table 4.11

The Moderating Effect of Audit Commttee Characteristic on the Relationship between Internal Audit Function and Earnings Quality (DA1).

Variables	Step 1		Step 2		Step 3		Step 4	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
_cons	0.1084***	9.72	0.0979***	7.27	0.1037***	6.45	0.1191**	2.02
ROA	-0.0919**	-2.55	-0.0882**	-2.43	-0.0898**	-2.48	-0.0909**	-2.50
LEV	0.0103	1.50	0.0089	1.30	0.0089	1.30	0.0087	1.24
OWCO	0.0001	1.56	0.0001	1.51	0.0001	1.35	0.0001	1.33
FSIZE	-0.0044***	-5.08	-0.0046***	-3.37	-0.0047***	-3.44	-0.0047***	-3.39
BIG4	-0.0036	-1.41	-0.0039	-1.53	-0.0044*	-1.71	-0.0043*	-1.66
LOSS	0.0132***	2.83	0.0130***	2.81	0.0131***	2.84	0.0127***	2.74
SGROWTH	0.0065	1.51	0.0068	1.59	0.0073*	1.71	0.0071*	1.65
BDSIZE			-0.0004	-0.52	-0.0002	-0.19	-0.0002	-0.20
BDIND			0.0041	0.37	0.0091	0.66	0.0103	0.74
BDMEET			0.0010	1.38	0.0010	1.30	0.0013	1.59
BDEXPERT			0.0071	0.91	0.0078	0.82	0.0076	0.79
IAFSOU			-0.0023	-0.78	-0.0019	-0.64	-0.0065	-0.23
IAFINV			0.0008	0.48	0.0007	0.42	-0.0009	-0.16
ACSIZE					0.0028	0.95	-0.0022	-0.25
ACIND					-0.0129	-1.39	-0.0601	-1.03
ACMEET					-0.0010	-0.86	0.0055**	1.97
ACEXPERT					-0.0027	-0.36	-0.0024	-0.06
ACCHPAR					0.0053**	2.09	0.0279	1.17
ACSIZE*IAFINV							0.0003	0.35
ACSIZE*IAFSOU							0.0038	0.73
ACIND*IAFINV							0.0045	0.84
ACIND*IAFSOU							-0.0092	-0.49
ACMEET*IAFINV							-0.0006**	-2.05
ACMEET*IAFSOU							0.0009	0.31
ACEXPERT*IAFINV							0.0004	0.09
ACEXPERT*IAFSOU							-0.0113	-0.79
ACCHPAR*IAFINV							-0.0022	-1.00
ACCHPAR*IAFSOU							0.0052	0.81
F-value	12.90***		9.68***		8.08***		6.30***	
R-squared	0.1148		0.117		0.1214		0.1251	
N	2036		2036		2036		2036	

Where: *, **, *** = p-value < .10, .05, .01, respectively, one-tailed, DA1 = discretionary accruals modified Jones Model (Kasznik 1999), ROA = return on assets, LEV = leverage, OWCO = ownership concentration, FSIZE = firm size, BIG4 = audit quality, LOSS = net loss, SGROWTH = sales growth, BDSIZE = board size, BDIND = board independence, BDMEET = board meetings, BDEXPERT = board financial expetise, ACSIZE = audit committee size, ACIND = audit committee independent, ACMEET = audit committee meeting, ACEXPERT = audit committee financial expertise, ACCHPAR = audit committee chairman audit partner, IAFSOU = internal audit function sourcing arrangements, IAFINV = investment in internal audit function.

Table 4.12

The Moderating Effect of Audit Commttee Characteristic on the Relationship between Internal Audit Function and Earnings Quality (DA2).

Variables	Step 1		Step 2		Step 3		Step 4	
	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.	Coef.	t-stat.
_cons	0.2117***	3.37	0.1967**	2.55	0.1953**	2.32	-0.4883	-1.53
ROA	-0.6447***	-3.76	-0.5817***	-3.38	-0.5842***	-3.39	-0.6085***	-3.50
LEV	0.0073	0.18	-0.0002	-0.00	0.0007	0.02	-0.0061	-0.15
OWCO	0.0002	0.57	0.0004	0.93	0.0004	0.91	0.0003	0.74
FSIZE	-0.0075	-1.55	0.0120	1.55	0.0095	1.21	0.0102	1.30
BIG4	-0.0204	-1.36	-0.0181	-1.20	-0.0171	-1.14	-0.0217	-1.45
LOSS	0.0560**	2.02	0.0483*	1.77	0.0433	1.58	0.0388	1.41
SGROWTH	-0.0398	-1.53	-0.0421*	-1.65	-0.0425*	-1.66	-0.0391	-1.52
BDSIZE			-0.0093**	-2.34	-0.0085*	-1.78	-0.0071	-1.45
BDIND			0.2223***	3.16	0.1962**	2.30	0.2232**	2.56
BDMEET			0.0119***	3.03	0.0066	1.40	0.0061	1.26
BDEXPERT			0.0608	1.33	0.1478***	2.61	0.1374**	2.43
IAFSOU			0.0292*	1.66	0.0334*	1.88	0.0870	0.56
IAFINV			-0.0322***	-3.28	-0.0348***	-3.52	0.0240	0.80
ACSIZE					0.0073	0.41	-0.0927*	-1.73
ACIND					0.0034	0.07	1.0394***	3.37
ACMEET					0.0173**	2.24	0.0179	1.18
ACEXPERT					-0.1070***	-2.64	-0.0969	-0.41
ACCHPAR					0.0167	1.17	0.1470	0.98
ACSIZE*IAFINV							0.0085*	1.86
ACSIZE*IAFSOU							-0.0216	-0.68
ACIND*IAFINV							-0.1013***	-3.50
ACIND*IAFSOU							0.2403**	2.26
ACMEET*IAFINV							0.0013	0.96
ACMEET*IAFSOU							-0.0255*	-1.72
ACEXPERT*IAFINV							0.0058	0.28
ACEXPERT*IAFSOU							-0.1381*	-1.81
ACCHPAR*IAFINV							-0.0104	-0.75
ACCHPAR*IAFSOU							-0.0305	-0.80
F-value	25.72***		21.31***		18.10***		13.92***	
R-squared	0.2434		0.265		0.2698		0.2787	
N	2036		2036		2036		2036	

Where: *, **, *** = p-value < .10, .05, .01, respectively, one-tailed, DA2 = discretionary accruals (Yoon et al., 2006), ROA = return on assets, LEV = leverage, OWCO = ownership concentration, FSIZE = firm size, BIG4 = audit quality, LOSS = net loss, SGROWTH = sales growth, BDSIZE = board size, BDIND = board independence, BDMEET = board meetings, BDEXPERT = board financial expetise, ACSIZE = audit committee size, ACIND = audit committee independent, ACMEET = audit committee meeting, ACEXPERT = audit committee financial expertise, ACCHPAR = audit committee chairman audit partner, IAFSOU = internal audit function sourcing arrangements, IAFINV = investment in internal audit function.

4.4.3.1 Audit Committee Size as a Moderator between Internal Audit Function and Earnings Quality

The results in Table 4.11 and Table 4.12 show that the coefficient of audit committee size (ACSIZE) has no significant relation with both DA1 and DA2 in the earlier models (step 3), and is significantly and negative related with DA2 at the 10% level in the interaction model (step 4). This indicates that when the relationship of ACSIZE is examined with the DA in isolation of the interaction with the IAF, there is no significant relationship. It could therefore be stated that the effectiveness of ACSIZE in conducting its oversight role may depend on the presence of the IAF. Upon inspection of the coefficient for interaction terms, there is an insignificant positive association between ACSIZE and investment in the IAF (ACSIZE * IAFINV) with DA1 ($t = 0.35$, $p > 0.10$). Moreover, Table 4.12 shows a significant positive coefficient of interaction at 10% ($t = 1.86$, $p < 0.10$), between the interaction of ACSIZE and investment in the IAF (ACSIZE * IAFINV) with DA2. Thus, H_9 is supported. This result indicates that firms have more investment in the IAF and that an increase in the AC members causes an increase in the level of DA (low EQ). Moreover, ACSIZE was found to moderate the relationship between investment in the IAF and DA2, which can be attributed to the explanation that more members on the AC and high cost in the IAF cannot reduce EM with high ownership concentration, and that this ultimately leads to weak AC members' independence and financial expertise. In relation to this, when directors do not have the ability to access financial information like executive managers (Yusof, 2010) high information asymmetry arises and the size of AC fails to make a difference.

With regards to the moderating effect of ACSIZE between IAF sourcing arrangements, Table 4.11 and Table 4.12 shows an insignificant and positive

coefficient (ACSIZE * IAFSOU) association with DA1, and an insignificant and negative coefficient association with DA2. This result indicates that ACSIZE does not moderate between the relationship of IAF sourcing arrangement and DA. Thus, H_{13} is rejected.

4.4.3.2 Audit Committee Independence as a Moderator between Internal Audit Function and Earnings Quality

Table 4.11 and Table 4.12 indicate that the coefficient for audit committee independence (ACIND) is not significant with either DA1 or DA2 in step 3, and the coefficient changes to become significantly positive with DA2 in the interaction level (step 4). This indicates that when the relationship of the ACIND is examined with DA (DA1 and DA2) in isolation of other monitoring mechanisms like the IAF, the relationship is not significant. Thus, it could be said that the association of the ACIND being effective may be contingent upon the presence of the IAF. This result also provides support for Agrawal and Knoeber (1996) who argued that the results on the effectiveness of a single mechanism might be misleading. However, Table 4.11 and Table 4.12 indicate that the coefficients of the interaction of ACIND with IAF (ACIND * IAFINV and ACIND * IAFSOU) and DA1 are not significant. While the coefficient of ACIND * IAFINV is negatively significant at the 1% level with DA2 ($t = -3.5, p < 0.01$). This indicates that ACIND plays a moderating effect between investment in the IAF and DA2. Thus, H_{12} is supported. The explanation of this result is that the increase in ACIND with an increase in the cost of the IAF leads to reduced EM (high EQ). Also, the coefficient of ACIND * IAFSOU is positively significant at the 5% level with DA2 ($t = 2.26$, $p < 0.05$), which indicates that ACIND has a moderating effect between the IAF outsources and DA2. Thus, H_{13} is supported. The explanation of this result is that the increase in ACIND with IAF outsources leads to a reduction in EM (high EQ).

Moreover, these results are consistent with other authors who claimed that to enhance the quality of financial reporting in firms, an effective internal control mechanisms is required. This effective internal control mechanisms can be derived from the good relationship between internal auditors and AC (Al-Shetwi *et al.*, 2011; Bierstaker, Chen, Christ, Ege & Mintchik, 2012; Davidson *et al.*, 2005; Doyle, Ge, & McVay, 2007; Wan-Hussin & Bamahroes, 2013; Zhang *et al.*, 2007).

4.4.3.3 Audit Committee Financial Expertise as a Moderator between Internal Audit Function and Earnings Quality

Table 4.11 and Table 4.12 show that the coefficients of the audit committee financial expertise (ACEXPET) is not significant and negative with DA1 ($t = -0.36$, $p > 0.10$) and significantly negative at the 1% level ($t = -2.64$, $p < 0.01$) with DA2 in step 3, and the coefficients change to be insignificantly negative with DA2 in the interaction level (step 4). This result also provides support for Agrawal and Knoeber (1996) who argued that the results on the effectiveness of a single mechanism only might be misleading. In addition, the results indicates that the coefficients of the interaction of ACEXPET with IAF (ACEXPRT * IAFINV) with DA1 and DA2 are not significant. This indicates that the ACEXPET is not moderating the relationship between IAF (cost and sourcing arrangement) and DA1. Thus, H_{15} is rejected.

Further, Table 4.11 shows that the coefficient of ACEXPRT * IAFSOU is insignificant and negative with DA1, which indicates that ACEXPET does not moderate the relationship between the IAF sourcing arrangements and DA1. However, Table 4.12 shows that the interaction of ACEXPET and IAF sourcing arrangements (ACEXPRT * IAFSOU) has a significantly negative coefficient with DA2 at the 10% level ($t = -1.81$, $p < 0.10$). The explanation of this result is that the increase in ACEXPET with in-house

IAF leads to reduced EM (high EQ). The result indicates that ACEXPET has a moderating effect between IAF sourcing arrangement and DA2. Thus, H_{16} is supported. This result supports other studies, such as Chadwick (2000) and Spekle *et al.* (2007), which mentioned that due to the in-house providers' in-depth expertise and financial knowledge, and role in managing crisis situations, such as those involving fraud, firms get benefits.

4.4.3.4 Audit Committee's Chairman Audit Partner as a Moderator between Internal Audit Function and Earnings Quality

Table 4.11 and Table 4.12 indicate that the coefficients of the audit committee's chairman audit partner (ACCPART) is significantly positive with DA1 and insignificantly positive with DA2 in step 3, and the coefficients changed to be insignificantly positive with DA1 in the interaction level (step 4). This indicates that when the relationship of the ACCPART is examined with DA (DA1 and DA2) in isolation of other monitoring mechanisms like IAF it has no relationship with DA2 and is significantly positive with DA1. Thus, it could be said that the association of the ACCPART in its oversight role may be contingent upon the presence of the IAF. However, Table 4.11and Table 4.12 indicate that the coefficients of the interaction of ACCPART with IAF (ACCHPAR * IAFINV and ACCHPAR * IAFSOU) and DA1 and DA2 is not significant and positive. This indicates that the ACCPART does not moderate the relationship between IAF (cost and sourcing arrangement) with DA1 and DA2. Thus, H_{18} and H_{19} are rejected.

4.4.3.5 Audit Committee Meeting as a Moderator between Internal Audit Function and Earnings Quality

Table 4.11and Table 4.12 indicate that the coefficients of the audit committee meeting (ACMEET) are not significant with DA1 and are significantly positive at the 5% level in the DA2 model in step 3, and the coefficients change to be significantly positive with DA1 ($t = 1.97, p < 0.05$) and insignificantly positive with DA2 ($t = 1.18, p > 0.10$) at the interaction level (step 4). This indicates that when the relationship of the ACMEET is examined with DA in isolation of other monitoring mechanisms like IAF it has no relationship with DA1 and is significantly positive at the 5% level with DA2. Thus, it could be said that the relation of the ACMEET of being effective may be contingent upon the presence of the IAF. This result also provides support for Agrawal and Knoeber (1996) who argued that the results on the effectiveness of single mechanism might be misleading.

However, the results indicate that the coefficients of the interaction of ACMEET with investment in the IAF (ACMEET * IAFINV) with DA1 is negative and significant at the 5% level ($t = -2.05, p < 0.05$), which indicates that the ACMEET has a moderating effect between investment in the IAF and DA1. Thus, H_{21} is supported. The explanation of this result is that the increase in ACMEET with the increase in the cost of the IAF leads to a reduction in EM (high EQ). This result also supports Barua *et al.* (2010) who found that the investment in the IAFs has a positive relationship with the number of AC meetings (a proxy for AC diligence). However, the coefficient of ACMEET * IAFINV has no significant association with DA2 where t-value ($t = 0.96, p > 0.10$). This result indicates that ACMEET does no moderate the relationship between the investment in IAF and DA2.

Table 4.11 also shows an insignificant positive coefficient in the interaction of ACMEET and IAF sourcing arrangements (ACMEET * IAFSOU) with DA1 (t = 0.31, p> 0.10). This result indicates that ACMEET not moderate the relationship between the sourcing arrangements of the IAF and DA1. Table 4.12 also indicates that the coefficient of interaction of ACMEET and IAF sourcing arrangements (ACMEET * IAFSOU) is significantly negative with DA2 (t = -1.72, p< 0.10), which indicates that the ACMEET has a moderating effect between IAF sourcing arrangement and DA2. Thus, H_{21} is supported. This result indicates that the increase in ACMEET when the IAF is in-house leads to a decrease in EM (high EQ). Therefore, this result is supported by some researchers who have reported the benefits of in-house providers such as in-depth knowledge and loyalty. Besides, their role in handling crisis situations, such as those involving fraud (Chadwick, 2000; Spekle *et al.*, 2007) and decreasing EM (Mansor *et al.*, 2013).

4.4.3.6 Audit Committee Score as a Moderator between the Internal Audit Function and Earnings Quality

Table 4.13 shows that firm size, leverage, ROA, audit quality, ownership concentration, loss and sales growth are entered in the first step as control variables into the regression model. The coefficient of determination, R^2, is 0.1148 and 0.2434 in DA1 and DA2, respectively, indicating that these values of R^2 of the level of DA (DA1 and DA2) can be explained by the firm control variables. Step 2, by adding the independent variables for the IAF (IAFSOU and IAFINV) and board of directors' effectiveness (BDSCORE), the R^2 increased to 0.1163 and 0.2479 in DA1 and DA2, respectively. In step 3, the coefficient of determination R^2 was found to be 0.1176 and 0.2497 in DA1 and DA2, respectively, indicating that these values for R^2 of the level of DA (DA1 and DA2) can be explained by the firm control variables,

independent variables including audit committee effectiveness (ACSCORE). This result indicates that there is a major effect from ACSCORE on EQ. In the final step when the interaction was entered, the R^2 of DA1 model increased from 0.1176 to 0.1189 and the $R^2$of DA2 model increased from 0.2497 to 0.2558. This indicates that the ACSCORE affect the relationship between the IAF and both discretionary accrual measurements (DA1 and DA2).

The results in Table 4.13 show that the coefficients significant level of control variables in the interaction step are similar to the previous step except sales growth in the DA2 model, which change from significant and negative at the 10% level to be insignificantly negative in the interaction step. In terms of the independent variables, Table 4.13 indicates that the coefficients IAFINV changes from significantly negative at the 1% level to be significantly negative at the 10% level in association with DA2. Also, the coefficient of IAFSOU relationship with DA2 changes from significantly positive at the 10% level to significantly positive at the 1% level. There is no change in the hierarchical regression result steps in the coefficient of the relationship between BDSCORE and DA (DA1 and AD2). In addition, the ACSCORE coefficient significant level changes from significantly positive at the 10% level in step 3 to be at the 5% level in step 4 with DA1, and change from significantly positive at the 5% level to be at the 10% level with DA2.

In terms of the moderator variables results (ACSCORE * IAFINV and ACSCORE *IAFSOU), Table 4.13 shows a significantly negative association between the interaction variables ACSCORE * IAFINV and DA1 at the 10% level ($t = -1.78$, $p < 0.10$). This indicates the high effectiveness of the AC with an increase in investment in the IAF leads to a decrease in DA (high EQ). This result indicates that AC

effectiveness moderates the relationship between investment in the IAF and DA1. Thus, H_{24} is supported. This result also supports Prawitt *et al*. (2009) who mentioned that firms invest relatively more in the IAF are more able to monitor and detect or deter material misstatements. Also, Barua *et al*. (2010) found that the investment in the IAF and the number of ACMEET (a proxy for AC diligence) are positively related. In addition, Carcello *et al*. (2005) found that when for firms that AC review their internal audit budget, these budgets are higher than other firms' internal audit budget. However, Table 4.13 indicates a negative but insignificant association between the interaction variables ACSCORE * IAFINV and DA2, which indicate that the ACSCORE does not moderate the relationship between the cost of IAF and EQ.

Therefore, Table 4.13 shows an insignificant and positive coefficient of the relationship between the interaction of ACSCORE with the IAF sourcing arrangement (ACSCORE * IAFSOU) and DA1. This result indicates that ACSCORE does not moderate the relationship between IAF sourcing arrangement and DA1. However, in Table 4.13 the coefficient of ACSCORE * IAFSOU has a significant and negative association with DA2 at the 5% level ($t = -2.5$, $p < 0.05$), which indicates that the firm has high ACSCORE and that its IAF is in-house and has low DA (high EQ). Thus, H_{25} is supported. This result supports Vecchio and Clinton (2003), and Rittenberg (1999) who argued that the in-house IAF could lead to higher internal control and monitoring over the audit processes, and to higher protection of real information, in-depth understanding of businesses processes and the related risks outsiders and non-employees. Thus, ACSCORE is a moderator between the IAF sourcing arrangement and EQ.

Table 4.13

The Moderating Effect of Audit Committee Effectiveness on the Relationship between Internal Audit Function and Earnings Quality

		Step 1				Step 2				Step 3				Step 4			
	Exp.	DA1		DA2		DA1		DA2		DA1		DA2		DA1		DA2	
Variables	sign	Coef.	t-stat.	Coef.	t- stat.	Coef.	t- stat.	Coef.	t- stat.	Coef.	t- stat.	Coef.	t- stat.	Coef.	t- stat.	Coef.	t- stat.
_cons	+/-	0.1080***	9.72	0.212***	3.37	0.1070***	7.95	0.3400***	4.19	0.1060***	7.93	0.3370***	4.17	0.0840***	4.94	0.1930*	1.84
ROA	-	-0.0919**	-2.55	-0.645***	-3.76	-0.0923**	-2.60	-0.638***	-3.71	-0.0931***	-2.60	-0.6440***	-3.75	-0.0936***	-2.61	-0.646***	-3.79
LEV	+	0.0103	1.50	0.0073	0.18	0.0095	1.38	0.0092	0.23	0.0094	1.37	0.0084	0.21	0.0096	1.41	0.0110	0.28
OWCO	+	0.0001	1.56	0.0002	0.57	0.0001	1.57	0.0003	0.66	0.0001	1.51	0.0002	0.57	0.0001	1.59	0.0003	0.74
FSIZE	-	-0.0044***	-5.08	-0.0075	-1.55	-0.00495***	-3.70	0.0081	1.05	-0.0050***	-3.72	0.0081	1.05	-0.0049***	-3.67	0.0086	1.12
BIG4	-	-0.0036	-1.41	-0.0204	-1.36	-0.0036	-1.40	-0.0148	-0.98	-0.00368	-1.44	-0.0156	-1.03	-0.0037	-1.43	-0.0182	-1.21
LOSS	+	0.0132***	2.83	0.0560**	2.02	0.0130***	2.80	0.0542*	1.96	0.0128***	2.76	0.0529*	1.91	0.0126***	2.73	0.0523*	1.90
SGROWTH	+	0.0065	1.51	-0.0398	-1.53	0.0066	1.54	-0.0433*	-1.68	0.0065	1.53	-0.0440*	-1.70	0.0065	1.52	-0.0406	-1.56
IAFINV	-					0.00067	0.41	-0.0316***	-3.08	0.0006	0.38	-0.0318***	-3.12	0.0026	1.38	-0.0219*	-1.9
IAFSOU	+/-					-0.00244	-0.80	0.0314*	1.73	-0.0025	-0.84	0.0308*	1.69	-0.0045	-1.10	0.0712***	2.72
BDSCORE	-					0.00167	1.51	0.0057	0.92	0.0009	0.76	0.0001	0.01	0.00097	0.81	0.0009	0.14
ACSCORE	-									0.0019*	1.70	0.0143**	2.10	0.0160**	2.01	0.0889*	1.74
ACSCORE*IAFINV	-													-0.0013*	-1.78	-0.0046	-1.02
ACSCORE*IAFSOU	+/-													0.0013	0.50	-0.0376**	-2.45
F-value		12.90***		25.72***		10.98***		22.09***		10.58***		21.10***		9.97***		19.92***	
R-squared		0.1148		0.2434		0.1163		0.2479		0.1176		0.2497		0.1189		0.2558	
N		2036		2036		2036		2036		2036		2036		2036		2036	

Where: *, **, *** = p-value < .10, .05, .01, respectively, DA1 = DA modified Jones model (Kasznik 1999), DA2= DA (Yoon *et al.*, 2006), ROA = return on assets, LEV = leverage, OWCO = ownership concentration, FSIZE = firm size, BIG4 = audit quality, LOSS = net loss, SGROWTH = sales growth, IAFSOU = IAF sourcing arrangements, IAFINV = investment in IAF, BDSCORE = board of directors effectiveness, ACSCORE = AC effectiveness.

4.5 Additional Empirical Analysis

In this section, additional tests are conducted to examine the robustness of the regression models to further provide supplementary results. The first test is to repeat the regression models (Model 1 and Model 2) using different measurements allowing for possible different results from the following variables: BDMEET, ACMEET, ACIND, IAFINV, and OWCO. In this test, a new variable is created, which is commitment of board meetings (total number of meetings attended divided by the total meetings held during the year) rather than the frequency of board meetings variable. In addition, another variable is created, which is the commitment of ACMEET (total number of meetings attended divided by the total meetings held during year) rather than the frequency of the ACMEET variable. The aim of this test is to examine the influence of the commitment in meetings to improving board effectiveness and ACSCORE in the relation with EQ. Also, a new variable of ACIND is created by using dummy variables "1" if all directors are independent and "0" otherwise (Saleh *et al.*, 2007), rather than the percentage of independent directors to ACSIZE. Additionally, following Johl *et al.* (2013) the IAFINV is measured as a percentage of firm size rather than the log of the IAF cost. Moreover, the largest ten shareholders percentage were used as another measurement of ownership concentration rather than the largest five shareholders percentage to examine the influence of the ownership concentration as the control variable on the model of internal monitoring mechanisms and EQ.

Table 4.14 shows that the coefficient of the relationship among board meetings, ACMEET, IAFINV, OWCO and EQ are similar to the earlier result in the main analysis in Table 4.9 for DA1 and DA2. However, Table 4.14 shows an insignificant

and positive coefficient of the relationship between ACIND and DA (DA1), which was significant and positive in the main results. In general, the majority of the results of the additional analysis of model one are similar to the main results, which gives support and robustness of the study's results in the main multiple regression models. This means that there are no significant differences in the results of this study when different measurements are used.

In the second robustness test, the basic model is further re-examined using different measurements of EQ to verify the robustness of the performed earlier regression analysis. The study used other common measurements of DA, such as the modified Jones model by Dechow *et al.* (1995),[13] and modified Jones model by Kothari *et al.* (2005)[14] in the regression analysis as other proxies for EQ with the two proxies used in the main analysis (modified Jones model by Kasznik, 1999; and Yoon *et al.*, 2006). Table 4.15 shows a comparison among five discretionary accrual measurements in terms of the absolute value of the DA that represent EQ. An increase in the absolute value of DA decreases the EQ and vice versa.

For model 1, Table 4.15 shows that the modified Jones model by Dechow *et al.* (1995) is fit and significant at the 1% level; F-value = 5.57, R^2 = 0.0929. Also, the modified Jones model by Kothari *et al.* (2005) is fit and significant at the 1% level; F-value = 5.25, R^2 = 0.0659. In addition, the extended modified Jones model by Kasznik (1999) is fit and significant at the 1% level; F-value = 8.08, R^2 = 0.1214 and the extended modified Jones model by Yoon *et al.* (2006) is also fit and significant at the 1% level; F-value = 18.1, R^2 = 0.2698.

[13] $ACC_{it} /TA_{it-1} = a_0+a_1(1 / TA_{it-1})+ a_2(\Delta REV - \Delta REC /TA_{it-1})+ a_3 (PPE /T A_{it-1})+ e_t$
[14] $ACC_{it} /TA_{it-1} = a_0+a_1(1 / TA_{it-1})+ a_2(\Delta REV - \Delta REC /TA_{it-1})+ a_3 (PPE /T A_{itt-1})+a_4 ROA_{it-1}e_t$

Table 4.14

Model One: Additional Multiple Regression Results by Different Independent Variables Measurements

$|DA| = \beta_0 + \beta_1$ BDSIZE $+ \beta_2$ BDIND $+ \beta_3$ BDMEET $+ \beta_4$ BDEXPERT $+ \beta_5$ ACSIZE $+ \beta_6$ ACIND $+ \beta_7$ ACMEET $+ \beta_8$ ACEXPERT $+ \beta_9$ ACCHPAR $+ \beta_{10}$ IAFINV $+ \beta_{11}$ IAFSOU $+ \beta_{12}$ FSIZE $+ \beta_{13}$ ROA $+ \beta_{14}$ LEV $+ \beta_{15}$ BIG4 $+ \beta_{16}$ OWCO $+ \beta_{17}$ LOSS $+ \beta_{18}$ SGROWTH $+ \beta_{19}$YEARS $+ \beta_{20}$ INDUSTRIES + e.

	Predicted	**DA1**		**DA2**	
Variables	**Sign**	**Coef.**	**t-stat.**	**Coef.**	**t- stat.**
_cons	+/-	0.1023***	3.34	0.3223*	1.94
BDSIZE	-	-0.0003	-0.40	-0.0100**	-2.11
BDIND	-	0.0077	0.57	0.2222***	2.63
BDEXPERT	-	0.0072	0.76	0.1219**	2.13
BDMEET	-	0.00001	0.04	-0.0015	-0.99
ACSIZE	-	0.0017	0.57	0.0068	0.37
ACIND	-	-0.0047	-1.60	-0.0015	-0.09
ACEXPERT	-	-0.0029	-0.40	-0.0965**	-2.38
ACCHPAR	-	0.0057**	2.26	0.0217	1.51
ACMEET	-	-0.0002	-1.17	-0.0003	-0.27
IAFINV	-	0.0085*	1.73	-0.0222**	-2.36
IAFSOU	+/-	-0.0040	-1.41	0.0056	0.36
ROA	-	-0.0913**	-2.55	-0.6264***	-3.72
LEV	+	0.0091	1.32	-0.00001	-0.00
OWCO	+	0.0001	0.95	0.0004	0.91
FSIZE	-	-0.0029**	-2.39	-0.0070	-1.15
BIG4	-	-0.0042	-1.64	-0.0195	-1.30
LOSS	+	0.0129***	2.82	0.0495*	1.81
SGROWTH	+	0.0072*	1.68	-0.0391	-1.50
YEARS	+/-	Included		Included	
INDUSTRIES	+/-	Included		Included	
F-value		8.10***		17.97***	
R^2		0.1227		0.2621	
N		2036		2036	

Where: *, **, *** = p-value < .10, .05, .01, respectively, DA1 = DA modified Jones model (Kasznik 1999), DA2= DA (Yoon *et al.*, 2006), BDSIZE = board size, BDIND = board independence, BDEXPERT = board financial expertise, BDMEET = board commitment, ACSIZE = AC size, ACIND = AC independent, ACEXPERT = AC financial expertise, ACCHPAR = AC chairman audit partner, ACMEET = AC commitment, IAFINV = investment in IAF, IAFSOU = IAF sourcing arrangement, ROA = return on assets, LEV = leverage, OWCO = ownership concentration, FSIZE = firm size, BIG4 = audit quality, LOSS = net loss, SGROWTH = sales growth.

In terms of model 2 (aggregate level), which examines the relationship between the effectiveness of the board and the AC (score level) with other study variables and the five DA, Table 4.16 indicates that the modified Jones model by Dechow *et al.* (1995) is fit and significant at the 1% level; F-value = 7.12, R^2 = 0.0871. The modified Jones model by Kothari *et al.* (2005) is fit and significant at the 1% level; F-value = 7.06, R^2 = 0.0612. In addition, the extended modified Jones model by Kasznik (1999) is fit and significant at the 1% level; F-value = 10.64, R^2 = 0.1182 and the extended modified Jones model by Yoon *et al*. (2006) is fit and significant at the 1% level; F-value = 21.09, R^2 = 0.2502.

Therefore, the results in both Table 4.15 and Table 4.16 show that when comparing between the modified Jones models (Dechow *et al.*, 1995; Kothari *et al.*, 2005, Kasznik 1999) and the extended modified Jones model by Yoon *et al.* (2006), the results state that the Yoon *et al.* (2006) model is robust because it has the higher R^2 (26.98%) power meaning that the independent and control variables explain the DA. Thus, it can be concluded that the Yoon *et al.* (2006) model is more powerful and effective in detecting EM than the modified Jones models for Malaysian firms[15]. This finding is consistent with Yoon *et al.* (2006) who found that the model is more effective than the modified Jones model in detecting EM among Korean companies. Also, this finding is consistent with Aminul Islam *et al.* (2011) who found that the modified Jones model (Dechow *et al.*, 1995) is less effective for detecting EM in Bangladeshi companies and that the Yoon *et al*. (2006) model is more powerful and effective in detecting EM. Additionally, Table 4.14 indicates that the results from the modified Jones models by Dechow *et al.* (1995) and Kothari *et al.* (2005) are similar

[15] See the explanation power of discretionary accruals models in Appendix E.

to the main results of the modified Jones model by Kasznik (1999) and the extended modified Jones model by Yoon *et al.* (2006).

Third robustness test is to examine the relationship between internal monitoring mechanisms and income increasing-decreasing EQ. This sensitive analysis is done because managing earnings could be different for income increasing-decreasing. Therefore, this test provides evidence of whether or not there is any different association between the internal monitoring mechanisms and income-increasing or income-decreasing. Table 4.17 shows the re-examination of the main model based on the income-increasing and income-decreasing of EM. However, the results show no difference in the relationship between the study variables and the income-increasing and income-decreasing DA1, except that the coefficient of ACCHPAR has an insignificant association with income-increasing and income-decreasing and is positively significant with all DA1 in the main model.

Table 4.15

Model One: Additional Multiple Regression Results by Different Discretionary Accruals Measurements

|DA| = β0+ β1 BDIND + β2 BDSIZE + β3 BDEXPERT+ β4 BDMEET + β5 ACSIZE +β6 ACIND + β7 ACMEET + β8 ACEXPERT + β9 ACCHPAR + β10 IAFINV + β11 IAFSOU + β12 FSIZE + β13 ROA + β14 LEV+ β15 BIG4+ β16 OWCO + β17 LOSS + β18SGROWTH + β19YEARS+ β20 INDUSTRIES + e.

Variables	**Predicted**	**m-Jones by Dechow *et al.* (1995)**		**m-Jones by Kothari (2005)**		**m-Jones by Kasznik (1999)**		**Yoon *et al.* (2006)**	
	sign	**Coef.**	**t-st.**	**Coef.**	**t-st.**	**Coef.**	**t-st.**	**Coef.**	**t-st.**
_cons	+/-	0.0801***	4.52	0.0673***	4.12	0.1037***	6.45	0.1953**	2.32
BDSIZE	-	-0.0005	-0.59	-0.0003	-0.39	-0.0002	-0.19	-0.0085*	-1.78
BDIND	-	0.0170	1.21	0.0059	0.49	0.0091	0.66	0.1962**	2.30
BDMEET	-	0.0007	0.88	0.0008	1.15	0.0010	1.30	0.0066	1.40
BDEXPERT	-	0.0074	0.71	0.0212**	2.25	0.0078	0.82	0.1478***	2.61
ACZIE	-	0.0052	1.63	0.0016	0.56	0.0028	0.95	0.0073	0.40
ACIND	-	-0.0150	-1.49	-0.0067	-0.75	-0.0129	-1.39	0.0034	0.07
ACEXPERT	-	-0.0079	-0.99	-0.0161**	-2.32	-0.0027	-0.36	-0.1070***	-2.64
ACCHPAR	-	0.0035	1.30	0.0003	0.14	0.0053**	2.09	0.0167	1.17
ACMEET	-	-0.0004	-0.31	-0.00003	-0.02	-0.00104	-0.86	0.0173**	2.24
IAFSOU	+/-	-0.0033	-0.99	-0.0043	-1.46	-0.0019	-0.64	0.0334*	1.88
IAFINV	-	0.0010	0.56	0.0015	1.02	0.0007	0.42	-0.0348***	-3.52
ROA	-	-0.1110***	-2.94	0.0636***	2.67	-0.0898**	-2.48	-0.58418***	-3.39
LEV	+	0.0167**	2.21	0.0211***	3.35	0.0089	1.30	0.0007	0.02
OWCO	+	0.0003***	3.01	0.0002***	2.67	0.0001	1.35	0.0004	0.91
FSIZE	-	-0.0042***	-2.86	-0.0042***	-3.36	-0.0047***	-3.44	0.0095	1.21
BIG4	-	-0.0054*	-1.96	-0.0007	-0.31	-0.0044*	-1.71	-0.0171	-1.14
LOSS	+	-0.0004	-0.07	0.0052	1.40	0.0131***	2.84	0.0433	1.58
SGROWTH	+	0.0141***	2.95	0.0116***	2.65	0.0073*	1.71	-0.0425*	-1.66
YEARS	+/-	Included		Included		Included		Included	
INDUSTRIES	+/-	Included		Included		Included		Included	
F-value		5.57***		5.25***		8.08***		18.1***	
R-squared		0.0929		0.0659		0.1214		0.2698	
N		2036		2036		2036		2036	

Where: *, **, *** = p-value < .10, .05, .01, respectively, BDSIZE = board size, BDIND = board independence, BDMEET = board meetings, BDEXPERT = board financial expertise, ACSIZE = AC size, ACIND = AC independent, ACEXPERT = AC financial expertise, ACCHPAR = AC chairman audit partner, ACMEET = AC meeting, IAFSOU = IAF sourcing arrangements, IAFINV = investment in IAF, ROA = return on assets, LEV = leverage, OWCO5 = ownership concentration, FSIZE = firm size, BIG4 = audit quality, LOSS = net loss, SGROWTH = sales growth.

Table 4.16

Model Two: Additional Multiple Regression Results by Different Discretionary Accruals Measurements

|DA| = β0 + β1 BDSCORE + β2 ACSCORE + β3 IAFINV + β4IAFSOU + β5 ROA + β6 LEV + β7 BIG4+ β8 OWCO + β9 LOSS + β10SGROWTH+ β11YEARS+ β12 INDUSTRIES + e.

Variables	**Predicted sign**	**m-Jones (Dechow *et al*., (1995)**		**m-Jones Kothari (2005)**		**m-Jones (Kasznik 1999)**		**Yoon *et al*. (2006)**	
		Coef.	**t-st.**	**Coef.**	**t-st.**	**Coef.**	**t-st.**	**Coef.**	**t-st.**
_cons	+/-	0.0822***	5.80	0.0691***	5.17	0.1023***	8. 00	0.3298***	4.17
BDSCORE	-	-0.0014	-1.10	0.0022*	1.80	-0.0017	-1.44	-0.0075	-1.15
ACSCORE	-	0.0020*	1.70	-0.0004	-0.39	0.0024**	2.26	0.01498**	2.36
IAFSOU	+/-	-0.0040	-1.23	-0.0047	-1.62	-0.0030	-0.99	0.0294	1.62
IAFINV	-	0.0015	0.83	0.0016	1.07	0.0012	0.71	-0.0305***	-2.98
ROA	-	-0.1150***	-3.04	0.0587**	2.44	-0.094***	-2.62	-0.6472***	-3.78
LEV	+	0.0173**	2.28	0.0214***	3.40	0.0098	1.43	0.0096	0.24
OWCO	+	0.0003***	3.16	0.0002***	2.87	0.0001	1.50	0.0002	0.58
FSIZE	-	-0.0041***	-2.91	-0.0044***	-3.66	-0.00479***	-3.62	0.0085	1.11
BIG4	-	-0.0053*	-1.88	-0.0002	-0.07	-0.0044*	-1.66	-0.0183	-1.18
LOSS	+	-0.0002	-0.05	0.0054	1.48	0.0127***	2.75	0.05196*	1.88
SGROWTH	+	0.0137***	2.86	0.0111**	2.55	0.0066	1.55	-0.0436*	-1.68
YEARS	+/-	Included		Included		Included		Included	
INDUSTRIES	+/-	Included		Included		Included		Included	
F-value		7.12***		7.06***		10.64***		21.09***	
R-squared		0.0871		0.0612		0.1182		0.2502	
N		2036		2036		2036		2036	

Where: *, **, *** = p-value < .10, .05, .01, respectively, BDSCORE = board Score, ACSCORE = AC score, IAFSOU = IAF sourcing arrangement, IAFINV = investment in IAF, ROA = return on assets, LEV = leverage, OWCO = ownership concentration, FSIZE = firm size, BIG4 = audit quality, LOSS = net loss, SGROWTH = sales growth.

Table 4.17 also shows that the coefficients of BDSIZE and ACEXPERT are significant and negative with income increasing for DA2, which indicates that the more directors on the board and the high financial expertise on the AC are related to the control of management to manage earnings in income increasing. The coefficient of IAFSOU is significantly positively related to income increasing DA2, which indicates that the outsourcing IAF reduces the manage earnings by income-increasing. In addition, Table 4.17 indicates that BDEXPERT and BDMEET have a significant and positive association with income-decreasing DA2, from which it can be concluded that board meetings and financial expertise are related to income-increasing EM. Also, IAFINV is significantly and negative with both income increasing an income-decreasing DA2. This result indicates that more investment in the IAF leads to the control of management to manage earnings in income increasing and decreasing in Malaysian Main Market listed companies.

Table 4.17

Model One: Multiple Regression Results of Income Increase-Decrease

$|DA| = \beta_0 + \beta_1$ BDSIZE $+ \beta_2$ BDIND $+ \beta_3$ BDMEET $+ \beta_4$ BDEXPERT $+ \beta_5$ ACSIZE $+ \beta_6$ ACIND $+ \beta_7$ ACMEET $+ \beta_8$ ACEXPERT $+ \beta_9$ ACCHPAR $+ \beta_{10}$ IAFINV $+ \beta_{11}$ IAFSOU $+ \beta_{12}$ FSIZE $+ \beta_{13}$ ROA $+ \beta_{14}$ LEV $+ \beta_{15}$ BIG4 $+ \beta_{16}$ OWCO $+ \beta_{17}$ LOSS $+ \beta_{18}$SGROWTH $+ \beta_{19}$ YEARS $+ \beta_{20}$ INDUSTRIES $+$ e.

		DA1						DA2					
		Income Increasing		Income Decreasing		All		Income Increasing		Income Decreasing		All	
Variables	**Sign**	**Coef.**	**t- stat.**	**Coef.**	**t- stat.**	**Coef.**	**t- stat.**	**Coef.**	**t- stat.**	**Coef.**	**t- stat.**	**Coef.**	**t-stat.**
_cons	+/-	0.0661***	3.00	0.0939***	4.21	0.10366***	6.45	0.1140	1.06	0.3320**	2.55	0.1953**	2.32
BDSIZE	-	-0.0010	-0.89	-0.0004	-0.42	0.0000	-0.19	-0.0160***	-2.77	-0.0023	-0.30	-0.0085*	-1.78
BDIND	-	0.0284	1.54	-0.0244	-1.58	0.0090	0.66	0.1370	1.37	0.104	0.78	0.1962**	2.3
BDMEET	-	0.0014	1.30	0.0007	0.84	0.0010	1.30	0.0096	1.50	0.0008	0.13	0.0066	1.40
BDEXPERT	-	-0.0022	-0.18	0.0028	0.24	0.0080	0.82	0.1080	1.41	0.1970**	2.38	0.1478***	2.61
ACSIZE	-	0.0022	0.52	0.0030	0.88	0.0030	0.95	0.0109	0.51	-0.0115	-0.44	0.0073	0.41
ACIND	-	-0.0025	-0.21	-0.0072	-0.59	-0.0130	-1.39	0.0930	1.49	-0.0857	-1.03	0.0034	0.07
ACEXPERT	-	-0.0048	-0.54	0.0017	0.18	-0.0030	-0.36	-0.1280**	-2.29	-0.0593	-1.04	-0.1070***	-2.64
ACCHPAR	-	0.0027	0.80	0.0041	1.37	0.0053**	2.09	0.0104	0.59	0.0034	0.16	0.0167	1.17
ACMEET	-	-0.0003	-0.17	-0.0014	-0.95	-0.0010	-0.86	0.0134	1.36	0.0275**	2.39	0.0173**	2.24
IAFSOU	+/-	-0.0004	-0.10	-0.0015	-0.40	-0.0020	-0.64	0.0428*	1.81	0.0204	0.81	0.0334*	1.88
IAFINV	-	-0.0015	-0.69	0.0031	1.50	0.0007	0.42	-0.0238*	-1.90	-0.0466***	-3.09	-0.0348***	-3.52
ROA	-	0.349***	8.23	-0.377***	-10.09	-0.0898**	-2.48	0.6390***	2.85	-1.4940***	-6.95	-0.5841***	-3.39
LEV	+	0.0321***	3.36	0.0086	1.13	0.0089	1.30	0.1000*	1.88	-0.0643	-1.18	0.0007	0.02
OWCO	+	0.0002	1.45	0.0001	1.03	0.0001	1.35	-0.00006	-0.10	0.0007	1.07	0.0004	0.91
FSIZE	-	-0.00297*	-1.71	-0.00546***	-3.26	-0.0047***	-3.44	-0.0006	-0.06	0.0197	1.55	0.0095	1.21
BIG4	-	-0.00609*	-1.78	-0.0005	-0.16	-0.0044*	-1.71	0.0026	0.13	-0.0292	-1.33	-0.0171	-1.14
LOSS	+	0.0168***	2.64	-0.0011	-0.23	0.0131***	2.84	0.1020***	2.90	-0.0221	-0.55	0.0433	1.58
SGROWTH	+	0.0035	0.55	0.0096*	1.81	0.0073*	1.71	-0.0361	-1.06	-0.0509	-1.37	-0.0425*	-1.66
YEARS	+/-	Included		Included		Included		Included		Included		Included	
INDUSTRIES	+/-	Included		Included		Included		Included		Included		Included	
F-value		5.22		14.82		8.08		17.56		9.6		18.1	
R^2		0.1736		0.4138		0.1214		0.3009		0.3506		0.2698	
N		1028		1008		2036		1156		880		2036	

Where: *, **, *** = p-value < .10, .05, .01, respectively, DA1 = DA modified Jones model (Kasznik, 1999), DA2= DA (Yoon *et al.*, 2006), BDSIZE = board size, BDIND = board independence, BDMEET = board meetings, BDEXPERT = board financial expertise, ACSIZE = AC size, ACIND = AC independent, ACEXPERT = AC financial expertise, ACCHPAR = AC chairman audit partner, ACMEET = AC meeting, IAFSOU = IAF sourcing arrangements, IAFINV =investment in IAF, ROA = return on assets, LEV = leverage, OWCO = ownership concentration, FSIZE = firm size, BIG4 = audit quality, LOSS = net loss, SGROWTH = sales growth.

4.6 Chapter Summary

In chapter four, the diagnostic tests for detecting outliers, multicollinearity, tests of normality, linearity, homoscedasticity and autocorrelation tests are reported. In addition, this chapter finalises the empirical investigation and demonstrates new evidence with regard to the effects of internal monitoring mechanisms, namely, the effectiveness of the BOD and AC, IAF, firm characteristics (ROA, LEV, OWCO, FSIZE, Big4, LOSS and SGROWTH) on EQ. Further, this chapter also finalises the empirical investigation and demonstrates new evidence with regard to the moderating effects of AC effectiveness on the IAF and EQ relationship.

The empirical results of this study support the research hypotheses of board size, ACEXPERT and IAFINV, and IAFSOU. The empirical results also support the moderators' effects of ACSIZE, ACIND, and ACMEET on the relationship between IAFINV and EQ. In addition, the study finds that ACIND, ACMEE and ACEXPERT are moderators for the relationships between the IAFOSU and EQ. Additionally, the results of this study support the moderator effect of ACSCORE on the relationships between IAFINV and IAFSOU with EQ.

CHAPTER FIVE
SUMMARY AND CONCLUSION

5.1 Introduction

This chapter presents overview, summary and conclusion of the thesis. Discussion the implications and the limitations of the study as well as suggestions for future research are presented also in this chapter. This chapter also provides discussion in detail the findings and provides further insights into the impact of the characteristics of the board of direcors (BOD) and audit committee (AC), and internal audit function (IAF) on earnings quality (EQ) followed by a discussion on the moderating effect of the AC between the IAF and EQ.

5.2 Overview of the Study

The objective of the study is to examine the relationship between corporate governance internal monitoring mechanisms and EQ among Malaysian Main Market listed companies. The study extends previous research by considering the internal monitoring mechanisms, namely, board of directors and AC effectiveness and IAF, in addition to firm characteristics with EQ. Furthermore, based on the effect of the firm's AC effectiveness on the IAF to monitor top management to manage earnings and protect the interests of minority shareholders, this study also examines the moderating effect of AC effectiveness on the relationship between the IAF and EQ.

In line with the agency theory and other previous empirical evidences who examined some characteristics of the BOD and the AC effectiveness, this study suggests that board of directors and ACs who have a large number of members, more independent directors, greater frequency of meetings and a large number of financial expertise are effective internal monitoring mechanisms. In addition, more investment in the IAF

and IAF sourcing arrangements are found to be effective internal monitoring mechanisms.

Drawing on the argument that corporate governance is a bundle of mechanisms that are not isolated from each other, this study suggests that firms with high EQ level, have high score for effectiveness of BOD and AC than firms with a low score of effectiveness for the BOD and AC. In addition, this study highlights the important role of internal monitoring mechanisms to monitor the management and reduce the agency problem. Furthermore, based on the agency theory, this study suggests that the level of EQ is high in firms that have efficient internal monitoring mechanisms. In addition, the resource dependence theory states that the more directors and independent directors bring their financial experience and other knowledge, it directly contributes to corporate control mechanisms. Thus, the agency and resource dependence theory are used to develop the hypotheses of this study. Table 5.1 shows the summary of the results of hypotheses testing.

Based on multiple regression analysis, several important findings emerge. First, this study finds that the increase in the level of board size, ACEXPERT, more IAFINV and IAF outsource leads to an increase in the level of EQ. This result supports the agency theory and resource dependence theory, which argue that strong internal governance monitoring mechanisms enhance the EQ. Second, the study finds that board independence, board financial expertise, frequency of ACMEET and ACCHPAR decrease the level of EQ. However, the frequency of board meetings, ACSIZE and ACIND have no significant relationship with EQ.

Table 5.1
Summary of the Results of Hypotheses Testing

Research Questions	Hypotheses		Findings
Q1	H_1	*There is a positive association between board size and earnings quality.*	Supported
	H_2	*There is a positive association between board independence and earnings quality*	Not Supported
	H_3	*There is a positive association between board financial expertise and earnings quality.*	Not Supported
	H_4	*There is a positive association between the frequency of board meeting and earnings quality.*	Not Supported
	H_5	*There is a positive association between the score of the board of director's effectiveness and earnings quality.*	Not Supported
Q2	H_6	*There is positively association relationship between investment in internal audit function and earnings quality.*	Supported
	H_7	*There is an association between the internal audit function sourcing arrangements and earnings quality.*	Supported
Q3	H_8	*There is a positive association between Audit committee size and earnings quality.*	Not Supported
	H_{11}	*There is a positive association between audit committee independence and earnings quality.*	Not Supported
	H_{14}	*There is a positive association between audit committee financial expertise and earnings quality.*	Support
	H_{17}	*There is a positive association between Chairman former audit partner on audit committee and earnings quality.*	Not Supported
	H_{20}	*There is a positive association between frequency of audit committee meeting and earnings quality.*	Not Supported
	H_{23}	*There is a positive association between the audit committee score and earnings quality.*	Not Supported
Q4	H_9	*Audit committee size moderates the relationship between investment in internal audit function and earnings quality.*	Supported
	H_{10}	*Audit committee size moderates the relationship between the internal audit function sourcing arrangements and earnings quality.*	Not Supported
	H_{12}	*Audit committee independence moderates the relationship between investment in the internal audit function and earnings quality.*	Support
	H_{13}	*Audit committee independence moderates the relationship between the IAF sourcing arrangements and earnings quality.*	Supported
	H_{15}	*Audit committee financial expertise moderates the relationship between investment in the internal audit function and earnings quality.*	Not Supported
	H_{16}	*Audit committee financial expertise moderates the relationship between the internal audit function sourcing arrangements and earnings quality.*	Supported
	H_{18}	*Chairman former audit partner on audit committee moderates the relationship between investment in of internal audit function and earnings quality.*	Not Supported
	H_{19}	*Chairman former audit partner on audit committee moderates the relationship between the internal audit function sourcing arrangements and earnings quality.*	Not Supported
	H_{21}	*Frequency of audit committee meeting moderates the relationship between investment in of internal audit function and earnings quality.*	Supported
	H_{22}	*Frequency of audit committee meeting moderates the relationship between the internal audit function sourcing arrangements and earnings quality.*	Supported
	H_{24}	*The audit committee score moderates the relationship between investment in the internal audit function and earnings quality.*	Supported
	H_{25}	*The audit committee score moderates the relationship between the internal audit function sourcing arrangements and earnings quality.*	Supported

Although the presence of independent directors, the average size of the board, the frequency of board meetings and financial experts on the board of Malaysian firms may reflect good governance, judging from the reported results, the BOD and AC are ineffective, which may be attributed to the major shareholder's role in selecting directors who are more interested in meeting their interests. In relation to this, the sample firms that restated their accounts were less independent and they had high managerial ownership according to Abdullah *et al*. (2010). In this case, if the nomination committee members are dominated by insiders, they have a higher tendency to nominate directors that they can manipulate. Also, in the same context, Yunos *et al*. (2010) found that boards of directors in Malaysian firms are dominated by insider shareholders who have the autonomy as controlling owners to overrule the decisions and power of the board, and concerning discretionary accruals (DA). Consequently, independent directors become ineffective as their monitoring role is compromised by serving management's interests (Abdullah & Nasir, 2004; Rahman & Ali, 2006). This may be the reason behind the ineffective influence of independent directors on the DA.

Likewise, using the score level of board characteristics, this study fails to find any significant evidence to show that the board of directors effectiveness (score) has a relationship with EQ. This may be because the directors' skill and knowledge might not be reflected by the size of the BOD, which is considered important for effective board. Additionally, the BOD delegates the responsibility of the monitoring function for financial reporting to ACs (McMullen, 1996; Beasley *et al.*, 2009), who is responsible for choosing the internal auditors, and, at the same time, to monitor the IAF. The board of directors' effectiveness negativly related to ownership concentration in the countries that

have a high ownership concentrated structure (Setia-Atmaja, 2009). Prior studies (e.g. Hu, Tam, & Tan, 2010; Setia-Atmaja, 2009) mentioned that major shareholders may have a tendency to select a weak governance structure and appoint on the board less independent directors.

In terms of the association between audit committee effectiveness (ACSCORE) and EQ, the study finds evidence to show that ACSCORE does not increase the level of EQ. The possible explanation is that by using individual characteristics of AC, AC financial expertise only has a significant positive association with EQ, while the frequency of ACMEET and ACCHPAR are significant but have a negative relationship with EQ. Furthermore, ACSIZE, ACIND also have no significant impact on EQ. This result supports the agency theory and the idea that the impact of internal governance mechanisms is complementary. This result suggests that certain mechanisms complement each other to become effective internal monitoring mechanisms.

Based on the hierarchical regression, the results show that ACSIZE, ACIND, ACMEET and ACSCORE moderate the relationship or the effect between investment in the IAF and EQ. Also, ACIND, ACEXPERT, ACMEET and ACSCORE moderate the relationship between the IAF sourcing arrangement and EQ. These results imply that the IAF is able to control the management to manage earnings and enhance the level of EQ when the AC is highly effective. The results provide a clear indication that the IAF is not effective in monitoring management in an environment where the ACSCORE is low.

5.3 Theoretical Implications

Although plenty of literature has addressed the issue of corporate governance using the agency theory and resource dependence theory, most studies focused on developed countries, which have a different environment from developing countries. Therefore, the first theoretical implication of this study is enriching the literature by adding to the understanding of agency theory and resource dependence theory in an emerging developing country, where firms are following the corporate governance code recommendations and controlled by high ownership concentration, in which the agency relationships are complex.

Second, in Malaysia the majority of previous studies in the field of EQ used modified Jones models to calculate discretionary accruals (DA). The current study contributes to the literature, in that it is the first study to provide an examination of the extended modified Jones model by Yoon *et al.* (2006) in Malaysia to measure DA. The use of this measurement is in response to the call by Yoon *et al.* (2006) and Aminul Islam *et al.* (2011) who claim that this measurement is able to detect DA in Asian countries. However, the study findings show that the modified Jones model by Kasznik (1999) and Yoon *et al*. (2006) are better for detecting EM.

Third, the study provides an examination of corporate governance internal monitoring mechanism practices in Malaysia where there is high ownership concentration in the majority of the Main Market listed companies. The study examines a comprehensive set of corporate governance internal monitoring mechanisms to investigate their impact on EQ. Furthermore, a set of corporate governance internal monitoring mechanisms is used separately (board size, board

independent, board meeting, board financial expertise, audit committee size, audit committee independent, audit committee financial expertise, audit committee chairman audit partner and audit committee meeting) and aggregately (i.e. a combination of board characteristics and a combination of audit committee characteristics). The aggregated analysis shows that individual governance mechanisms need to be aggregated together to be effective in reducing the agency cost because they work complementary to one another. As, the size of the board and audit committee should be fit with firm's size and the directors' independence in the firms can be more monitoring efficient when they have financial expertise to understand the accounting numbers in the financial statements and attend the frequency of meeting to reflect them independence and expertise to affect the decision making during the meeting.

Fourth, this study considers the moderating effects of ACSIZE on the relationship of the IAF with EQ. The significant results provide support to the agency theory, that as the level of agency cost in the company increase (decrease), the increase in the effect of the cost of IAF leads to an increase (decrease) in the level of EQ in order to influence the agency cost.

Fifth, this study considers the moderating effects of ACIND on the association of the investment in IAF and type of outsource with EQ. The significant results provide support to the explanation that in situations under which the ACIND is high, the IAF will be effective. Thus, having high ACIND increases EQ, which leads to high quality of financial reporting. Therefore, the significant result of ACIND indicates that this variable is essential for fully understanding the relationship between the IAF

and EQ and supports the Malaysian Code on Corporate Governance for having ACIND.

Sixth, this study considers the ACEXPERT to moderate the effect between the IAF sourcing arrangement and EQ. The significant results provide a clear indication that high financial expertise on the AC is effective for monitoring management and solving the agency problem between the minority and majority shareholders where the IAF is practised in-house. Also, it supports the Malaysian Code on Corporate Governance to have at least one member financial expertise at the AC.

Seventh, this study considers that ACCHPAR moderates the effect between the IAF and EQ. The insignificant results indicate that the firms that have ACCHPAR are not effective in terms of the IAF to monitor management and solve the agency problem between the minority and majority shareholders.

Eighth, this study extends previous studies by examining the ACMEET to moderate the relationship between IAF and EQ. The significant results provide support to the agency theory that more cost of IAF and its practices in-house works as internal monitoring mechanism to solve the agency problem.

Lastly, this study extends the previous studies by examining the ACSCORE to moderate the relationship between the IAF (investment in IAF and sourcing arrangement) and EQ. The significant results provide support for the agency theory, that the effectiveness of the AC works as an internal monitoring mechanism to solve the agency problem.

Therefore, the findings of the study indicate that the relationship between the IAF and EQ require the agency and resource dependence theory to explain the phenomenon. Based on the direct relationship between the effectiveness of the IAF and EQ, the results show that the agency theory and resource dependence theory are appropriate for explaining the phenomenon in the Malaysian Main Market listed companies. In addition, when the moderating effect of the AC is introduced in the relationship, the result supports the agency theory and resource dependence theory.

5.4 Practical and Policy Implications

The findings of this study should be of potential interest to policymakers, investors, managers, creditors and researchers, especially concerning issues relating to EQ and corporate governance practices. Policymakers might use the findings regarding EQ in relation to governance practices, to recognize the important roles played by the IAF effectiveness which consider a fundamental characteristic of the corporate governance system in Malaysia because their monitoring effects improve the EQ in Malaysian companies that have high AC effectiveness. Therefore, policymakers should not assume that the IAF is a good mechanism to protect the interests of shareholders in firms in which the AC has low effectiveness. Thus, the policymakers should require companies to have an effective IAF and effective AC because they complement each other.

In relation to the new dimension of ACCHPAR, the findings indicate a practical contribution of the ACCHPAR in decreasing the level of EQ in the Malaysian Main Market listed companies. However, the lack of a relationship between ACCHPAR to moderate the relationship between IAF and EQ, does not work as a good mechanism

to protect the shareholders' interests. Further, another practical implication for MCCG regulations is that the presence of a chairman audit partner on the audit committee might present another potential threat to auditor independence. As a chairman audit partner serving on a client's audit committee could affect the audit quality. Therefore, regulators need to consider such attribute of audit committee to be able to improve the independence of the auditor. Thus, the findings of this study provides evidence for policymakers to focus on increasing the ACIND, which enhances other characteristics to monitor the management and improve the internal corporate governance mechanisms, and, consequently, leads to an increase in the level of EQ.

Other implications for the auditors are that they should know that not all internal governance mechanisms are effective in detecting EM among Malaysian firms. In other words, the auditors should not assume that the reported information in the financial statements have been closely monitored by the board and AC. Therefore, to ensure high level of transparency, auditors should perform independent audit tasks and demand further information. In terms of the managers, the findings of this study provide them information about which attributes among the internal monitoring mechanisms play a significant role to enhance the financial reporting quality.

The findings of this study will help the investor to know that their interests will be protected under ACs with high effectiveness and with high investment in IAF. Additionally, the findings of this study allow investors to be mindful of EM and to assess financial reporting reliability. The findings of this study give investors a sign that corporate governance monitoring does not play an effective role in enhancing

financial reporting quality, which might be due to the high ownership concentration where the information asymmetry is high.

The findings of this study might be useful to corporate governance researchers who emphasize the issues relating to agency conflict between the minority and majority shareholders. The investigation of the moderating effect of the AC on the relationship between the IAF and EQ provides evidence that the ability of the IAF to protect minority shareholder depends on the effectiveness of the AC. Therefore, corporate governance researchers in Malaysia should give more attention to the issue of minority interests based on the internal monitoring aspects of the companies being researched.

Another party that might benefit from the findings of this study is the Malaysian regulators in that the findings will help them to develop new regulations and recommendations related to corporate governance to enhance EQ. It will also help them understand the capacity of the current management to manage earnings among Malaysian companies and to know the corporate governance practices of these companies. Creditors might get benefit from the findings in this study because it provides a better understanding of how the internal governance monitoring affects EQ, which reflects the quality of financial reporting. Based on the results of this study, the creditors should be aware of the financial reporting quality and might demand more information to make appropriate decisions.

5.5 Limitations

This study contains a number of limitations. The first one is related to the issue of generalization of the results. The results of this study are drawn from non-financial listed companies in Malaysian Main Market listed companies, which are considered to be regulated industries. Therefore, the findings of the study might not be applicable to other sectors because the internal strength of the firm's governance structures is affected by industry. However, the results overall are in line with previous researches and with the agency theory and resource dependence theory, in particular, in terms of the monitoring function of the internal monitoring mechanisms and EQ.

Secondly, the study period covered is only four years from 2009 to 2012. This limitation could not be overcome because 2009 is the first full year requiring disclosure about the IAF cost and sourcing arrangement in compliance with the revision Code on Corporate Governance (2007), and 2012 is the last year during the study collection data period.

Thirdly, limitations related to measurement issues. In relation to the measurement of the dependent variable, this study measures the EQ by DA, as evaluating the quality of earnings has several measurements, such as smoothness, accounting conservatism and persistence. Additionally, there is no clear method to detect EM. Therefore, to reflect both management discretion in signalling relevant information and management's opportunistic behaviour, this study used DA. These DA can be separated from total accruals by using empirical methods, such as modified Jones model of Dechow *et al.* (1995), extended modified Jones model of Kasznik (1999),

Yoon *et al*. (2006) and the performance-matched model of Kothari, *et al.* (2005) to detect DA, which reflect the EQ.

Lastly, limitations related to other independent variables, which may influence the EQ and internal monitoring mechanisms, such as ownership structure, because Malaysian companies have high ownership concentration, which may affect the monitoring function of the board and AC. However, this study does not examine the relationship between internal monitoring employed by different ownership structures as the main objective of this study is to examine the relationship between internal monitoring mechanisms and EQ. Also, other variables that may affect EQ are not examined, such as BOD and AC characteristics in a qualitative nature, because this study is a quantitative research and uses data available from annual reports and DataStream.

Nevertheless, although the above limitations highlight scope for improvement in future EQ studies, it should not detract from the value of this research. As this research follows a rigorous process and achieves its objectives, the usefulness of this research is undeniable.

5.6 Recommendations for Future Research

This study focuses on the relation of EQ on the BOD, AC and IAF as corporate governance internal monitoring mechanisms. This study can be considered and extended in future research in several ways, in addition to overcoming its limitations, as follows:

Firstly, as the samples used in this study only involve the non-financial and main market listed companies in Malaysia and a period of four years, in future, more samples could be conducted over a longer period of time. The test of the hypotheses could also be extended to different East Asian countries to compare the results with the results of this study, in order to provide evidence concerning whether or not the roles of monitoring mechanisms in emerging countries differ.

Secondly, this study did not examine the effect of the ownership structure. Hence, the type of ownership might impact on EQ. Therefore, studies on corporate governance and EQ in reducing the agency cost can be further investigated by considering the substituting and complementary nature of both corporate governance and ownership structure jointly effect. Such research should be carried out by considering different ownership types to provide evidence concerning whether these internal monitoring mechanisms work with different ownership types and their relationship with EQ.

Lastly, in relation to the measurement of the dependent variable, this study measures the EQ by DA. Thus, future research should consider other measurements, such as accrual quality, which needs at least seven years for its calculation, because future research can include a longer period (2013, 2014 and 2015).

5.7 Conclusion

The study investigates the roles of internal monitoring mechanisms, namely, the effectiveness of the BOD and AC, IAF on EQ in Malaysian Main Market listed companies. Furthermore, the study provides evidence that the role of the IAF to

enhance the level of EQ is affected by the AC effectiveness. Generally, this study suggests that these monitoring mechanisms do matter in the Malaysian Main Market listed companies. However, not all elements of measured effectiveness of the BOD and AC are important, as the study finds no evidence that frequency of board meeting, ACIND and ACSIZE are significantly related to EQ. Nevertheless, the study failed to provide any support for the role of the elements measured for the effectiveness of the BOD and AC when aggregated in enhancing the level of EQ in companies listed on the Malaysian Main Market.

The results of the relationships between the role of the BDSCORE and ACSCORE and EQ suggest that some of the internal monitoring mechanisms, acknowledged in the developed countries as portraying best practice, are not appropriate for the business environment in Malaysia. Moreover, these findings demonstrate that because of the different environments, diverse countries display different governance structures. Thus, simply adopting the styles for corporate governance structures from the UK and US in emerging countries like Malaysia should be reviewed. In addition, the main contribution to knowledge of the research is the findings that AC effectiveness moderates the relationship between the IAF and EQ, which suggests that firms with highly effective ACs have a high monitoring role on the IAF, which leads to high EQ. Thus, in emerging countries, such as Malaysia, these internal monitoring mechanisms cannot stand alone because they work complementary to each other. The findings could assist regulators to define which corporate governance attributes are effective and to evaluate the requirements of corporate governance practices.

REFERENCES

Abbott, L. J., Park, Y., & Parker, S. (2000). The effects of audit committee activity and independence on corporate fraud. *Managerial Finance*, 26(11), 55-68.

Abbott, L. J., Parker, S., & Peters, G. F. (2004). Audit committee characteristics and restatements. *Auditing*: *A Journal of Practice & Theory*, 23(1), 69-87.

Abbott, L. J., Parker, S., Peters, G. F., & Raghunandan, K. (2003).The association between audit committee characteristics and audit fees. *Auditing: A Journal of Practice & Theory*, 22(2), 17-32.

Abdul Latiff, R., & Taib, F. (2011). The effects of ownership structure and monitoring mechanisms on earnings quality and cost of equity. Retrieved from SSRN website: http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1767655

Abdul Rahman, R. A., & Ali, F. H. M. (2006). Board, audit committee, culture and earnings management: Malaysian evidence. *Managerial Auditing Journal*, 21(7), 783-804.

Abdullah, S. N. (1999). *The role of corporate governance and ownership structure on accounting earnings quality* (Unpublished doctoral Dissertation), Universiti Utara Malaysia, Kedah, Malaysia.

Abdullah, S. N. (2006). Directors' remuneration, firm's performance and corporate governance in Malaysia among distressed companies. *Corporate Governance*, 6(2), 162-174.

Abdullah, S. N., & Nasir, N. M. (2004). Accrual management and the independence of the boards of directors and audit committees. *International Journal of Economics, Management and Accounting,* 12(1), 49-80.

Abdullah, S. N., Halim, N. F. C. A., & Nelson, S. P. (2014). The impact of new regulations on earnings quality among Malaysian firms. *International Journal of Economics, Management and Accounting*, *22*(2), 21-68.

Abdullah, S.N., Yusof, N. M., & Nor, N. M. (2010). Financial restatements and corporate governance among Malaysian listed companies. *Managerial Auditing Journal*, *25*(6), 526-552.

Aboody, D., Hughes, J., & Liu, J. (2005). Earnings quality, insider trading, and cost of capital. *Journal of Accounting Research,* 43(5), 651-673.

Adams, R. (2005). What do boards do? Evidence from board committee and director compensation data. EFA 2005 Moscow Meetings Paper. Available at SSRN: http://dx.doi.org/10.2139/ssrn.397401

Adams, R., Hermalin, B. E., & Weisbach, M. S. (2008). The role of boards of directors in corporate governance: A conceptual framework and survey: Retrieved from the International Bureal of Economic Research website: http://www.nber.org/papers/w14486

Adibah Wan Ismail, W., Anuar Kamarudin, K., Van Zijl, T., & Dunstan, K. (2013). Earnings quality and the adoption of IFRS-based accounting standards: Evidence from an emerging market. Asian Review of Accounting, 21(1), 53-73.

Adiguzel, H. (2013). Corporate governance, family ownership and earnings management: emerging market evidence. *Accounting and Finance Research*, *2*(4), p17-33.

Agrawal, A., & Chadha, S. (2005). Corporate governance and accounting scandals. *Journal of Law and Economics*, 48(2), 371-406.

Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanisms to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis*, 31(03), 377-397.

Aguinis, H. (1995). Statistical power with moderated multiple regression in management research. *Journal of Management*, *21*(6), 1141-1158.

Ahlawat, S. S., & Lowe, D. J. (2004). An examination of internal auditor objectivity: In-house versus outsourcing. *Auditing*: *A Journal of Practice & Theory*, 23(2), 147-158.

Ahmad-Zaluki, N. A., & Wan-Hussin, W. N. (2010). Corporate governance and earnings forecasts accuracy. *Asian Review of Accounting*, 18(1), 50-67.

Ahmed, K., & Henry, D. (2012). Accounting conservatism and voluntary corporate governance mechanisms by Australian firms. *Accounting & Finance*, *52*(3), 631-662.

Ahmed, K., Hossain, M., & Adams, M. B. (2006). The effects of board composition and board size on the informativeness of annual accounting earnings. *Corporate Governance: An International Review*, 14(5), 418-431.

AL-Dhamari, R. A., & Ismail, K. N. I. B. K. (2012). Governance structure, surplus free cash flow (SFCF), and earnings quality: Evidence from Malaysia. *Journal of Modern Accounting and Auditing*, 8(10), 1437-1452.

Ali Shah, S., Butt, S., & Hassan, A. (2009). Corporate governance and earnings management an empirical evidence form Pakistani listed companies. *European Journal of Scientific Research*, 26(4), 624-638.

Ali, R., Ahmad, Z., & Anusakumar, S. V. (2011). Stock market overreaction and trading volume: evidence from Malaysia. Asian Academy of Management *Journal of Accounting and Finance*, 7(2), 103-119.

Al-Shetwi, M., Ramadili, S. M., Chowdury, T. H. S., & Sori, Z. M. (2011). Impact of internal audit function (IAF) on financial reporting quality (FRQ): Evidence from Saudi Arabia. *African Journal of Business Management*, 5(27), 11189-11198.

Alves, S. (2012). Ownership structure and earnings management: Evidence from Portugal. *Australasian Accounting Business and Finance Journal*, 6(1), 57-74.

Alves, S. (2013). The impact of audit committee existence and external audit on earnings management: Evidence from Portugal. *Journal of Financial Reporting & Accounting*, *11*(2), 143-165.

Alzoubi, E. S. S. (2012). Board characteristics and financial reporting quality among Jordanian Listed Companies: Proposing conceptual framework. *Asian Journal of Finance & Accounting*, 4(1), 245-258.

Ameer, R., Ramli, F., & Zakaria, H. (2010). A new perspective on board composition and firm performance in an emerging market. *Corporate Governance,* 10(5), 647-661.

Aminul Islam, M. A., Ali, R., & Ahmad, Z. (2011). Is modified Jones model effective in detecting earnings management? Evidence from a developing economy. *International Journal of Economics and Finance*, *3*(2), 116-125.

Ardekani, A. M., Younesi, N., & Hashemijoo, M. (2012). Acquisition, earnings management and firm's performance: Evidence from Malaysia. *Journal of Business*, *4*(1), 91-110.

Ashbaugh, H., LaFond, R., & Mayhew, B. W. (2003). Do nonaudit services compromise auditor independence? Further evidence. *The Accounting Review*, 78(3), 611-639.

Auh, S., & Menguc, B. (2005). Balancing exploration and exploitation: The moderating role of competitive intensity. *Journal of Business Research*, *58*(12), 1652-1661.

Badolato, P. G., Donelson, D. C., & Ege, M. (2014).Audit committee financial expertise and earnings management: The role of status. *Journal of Accounting and Economics*, *58*(2–3), 208-230

Ball, R., & Brown, P. (1968). An empirical evaluation of accounting income numbers. *Journal of Accounting Research*, 6(2), 159-178.

Ball, R., & Shivakumar, L. (2005). Earnings quality in UK private firms: comparative loss recognition timeliness. *Journal of Accounting and Economics*, 39(1), 83-128.

Ball, R., Kothari, S., & Robin, A. (2000).The effect of international institutional factors on properties of accounting earnings. *Journal of Accounting and Economics*, 29(1), 1-52.

Ball, R., Robin, A., & Wu, J. S. (2003). Incentives versus standards: properties of accounting income in four East Asian countries. *Journal of Accounting and Economics*, 36(1-3), 235-270.

Ballesta, J. P. S., & Garcia-Meca, E. (2005). Audit qualifications and corporate governance in Spanish listed firms. *Managerial Auditing Journal*, 20(7), 725-738.

Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173.

Barth, M. E., Landsman, W. R., & Lang, M. H. (2008). International accounting standards and accounting quality. *Journal of Accounting Research*, 46(3), 467-498.

Barua, A., Rama, D. V., & Sharma, V. (2010). Audit committee characteristics and investment in internal auditing. *Journal of Accounting and Public Policy*, 29(5), 503-513.

Basu, S. (1997). The conservatism principle and the asymmetric timeliness of earnings1. *Journal of Accounting and Economics*, 24(1), 3-37.

Baum, C. F. (2001). Residual diagnostics for cross-section time series regression models. *The Stata Journal*, *1*(1), 101-104.

Baxter, P., & Cotter, J. (2009).Audit committees and earnings quality. *Accounting & Finance*, 49(2), 267-290.

Beasley, M. S. (1996). An empirical analysis of the relation between the board of director composition and financial statement fraud. *Accounting Review*, 71(4), 443-465.

Beasley, M. S., & Salterio, S. E. (2001). The relationship between board characteristics and voluntary improvements in audit committee composition and experience. *Contemporary Accounting Research*, 18(4), 539-570.

Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Lapides, P. D. (2000). Fraudulent financial reporting: Consideration of industry traits and corporate governance mechanisms. *Accounting Horizons*, *14*(4), 441-454.

Beasley, M. S., Carcello, J. V., Hermanson, D. R., & Neal, T. L. (2009). The audit committee oversight process. *Contemporary Accounting Research*, 26(1), 65-122.

Becker, C. L., DeFond, M. L., Jiambalvo, J., & Subramanyam, K. R. (1998). The effect of audit quality on earnings management. *Contemporary Accounting Research*, 15(1), 1-24.

Bedard, J. C., & Johnstone, K. M. (2004). Earnings manipulation risk, corporate governance risk, and auditors' planning and pricing decisions. *The Accounting Review*, 79(2), 277-304.

Beekes, W., Pope, P., & Young, S. (2004). The link between earnings timeliness, earnings conservatism and board composition: evidence from the UK. Corporate Governance: *An International Review*, 12(1), 47-59.

Bekiris, F. V., & Doukakis, L. C. (2011). Corporate governance and accruals earnings management. *Managerial and Decision Economics*, 32(7), 439-456.

Benkraiem, R. (2009). Does the presence of independent directors influence accruals management? *Journal of Applied Business Research*, 25(6), 77-86.

Beuselinck, C., & Manigart, S. (2007). Financial reporting quality in private equity backed companies: The impact of ownership concentration. *Small Business Economics*, 29(3), 261-274.

Bhagat, S., & Bolton, B. (2008). Corporate governance and firm performance. *Journal of Corporate Finance*, 14(3), 257-273.

Bierstaker, J., Chen, L., Christ, M. H., Ege, M., & Mintchik, N. (2012). Obtaining assurance for financial statement audits and control audits when aspects of the financial reporting process are outsourced. *Auditing: A Journal of Practice & Theory*, *32*(sp1), 209-250.

Bin-Zulkafli, A., Adul Samad, M., & Ismail, M. (2007). Corporate Governance in Malaysia. *Malaysian Institute of Corporate Governance*.1, 18.

Blue Ribbon Committee Report (1999) available at: http://www.cov.com/files/Publication/e8454dae-13d1-46dc-9ffd-dafc448dc40b/Presentation/PublicationAttachment/48b0bb8a-5870-497f-88ee-deabb8725bce/oid6400.PDF.

Bonn, I., Yoshikawa, T., & Phan, P. H. (2004). Effects of board structure on firm performance: A comparison between Japan and Australia. *Asian Business & Management*, 3(1), 105-125.

Bradbury, M., Mak, Y. T., & Tan, S. (2006). Board characteristics, audit committee characteristics and abnormal accruals. *Pacific Accounting Review*, 18(2), 47-68.

Brown, L. D., & Caylor, M. L. (2006). Corporate governance and firm valuation. *Journal of Accounting and Public Policy*, 25(4), 409-434.

Buchalter, S. D., & Yokomoto, K. L. (2003). Audit committees' responsibilities and liability.*CPA journal*, 73(3), 18-23.

Bujaki, M., & McConomy, B. J. (2002). Corporate governance: Factors influencing voluntary disclosure by publicly traded Canadian firms. *Canadian Accounting Perspectives*, 1(2), 105-139.

Buniamin, S., Johari, N. H., Rahman, N. R. A., & Rauf, F. H. A. (2012). Board diversity and discretionary accruals of the Top 100 Malaysia corporate governance (MCG) index company. *African Journal of Business Management*, *6*(29), 8496-8503.

Burak Guner, A., Malmendier, U., & Tate, G. (2008). Financial expertise of directors. *Journal of Financial Economics*, 88(2), 323-354.

Burkart, M., Gromb, D., & Panunzi, F. (1997). Large shareholders, monitoring, and the value of the firm. *The Quarterly Journal of Economics*, 112(3), 693-728.

Burrowes, A., & Hendricks, A. (2005). Independent financial experts: From wished for to wistful thinking. *Managerial Finance*, 31(9), 52-62.

Bursa delists 95 firms for financial problems', New Straits Times, July 21, 2010, available at:

http://www.mia.org.my/new/downloads/circularsandresources/resource/newspaper/2010/07/week03.pdf.

Bushee, B. J., & Noe, C. F. (2000). Corporate disclosure practices, institutional investors, and stock return volatility. *Journal of accounting research*, 171-202.

Bushman, R. M., & Smith, A. J. (2001). Financial accounting information and corporate governance. *Journal of Accounting and Economics*, 32(1), 237-333.

Cadbury A. (1992) Report of the Committee on the Financial Aspect of Corporate Governance, London, U.K: Gee & Co. Limited

Caplan, D. H., & Kirschenheiter, M. (2000). Outsourcing and audit risk for internal audit services. *Contemporary Accounting Research*, 17(3), 387-428.

Carcello, J. V., Hermanson, D. R., & Raghunandan, K. (2005). Factors associated with US public companies' investment in internal auditing. *Accounting Horizons*, 19(2), 69-84.

Carcello, J. V., Hermanson, D. R., Neal, T. L., & Riley, R. A. (2002). Board characteristics and audit fees. *Contemporary Accounting Research*, 19(3), 365-384.

Carey, P., Subramaniam, N., & Ching, K. C. W. (2006). Internal audit outsourcing in Australia. *Accounting & Finance*, 46(1), 11-30.

Carpenter, M. A., Geletkanycz, M. A., & Sanders, W. G. (2004). Upper echelons research revisited: Antecedents, elements, and consequences of top management team composition. *Journal of Management*, 30(6), 749-778.

Cassell, C. A., Giroux, G. A., Myers, L. A., & Omer, T. C. (2012). The effect of corporate governance on auditor-client realignments. *Auditing*: *A Journal of Practice & Theory*, 31(2), 167-188.

Chadwick, W. E. (2000). Keeping internal auditing in-house. *Internal Auditor* 57(3): 88.

Chaney, P. K., & Lewis, C. M. (1995). Earnings management and firm valuation under asymmetric information. *Journal of Corporate Finance*, 1(3), 319-345.

Che Haat, M. H. (2006). The effect of corporate governance on transparency and performance of Malaysian companies. *Unpublished PhD Dissertation. Universiti Teknologi Mara, Malaysia*.

Chen, C. Y., Lin, C. J., & Lin, Y. C. (2008). Audit partner tenure, audit firm tenure, and discretionary accruals: does long auditor tenure impair earnings quality? *Contemporary Accounting Research, 25*(2), 415-445.

Chen, H., Tang, Q., Jiang, Y., & Lin, Z. (2010). The role of international financial reporting standards in accounting quality: Evidence from the European Union. *Journal of International Financial Management & Accounting*, *21*(3), 220-278.

Chen, K. Y., & Zhou, J. (2007). Audit committee, board characteristics, and auditor switch decisions by Andersen's clients. *Contemporary Accounting Research*, 24(4), 1085-1117.

Chen, K. Y., Elder, R. J., & Hsieh, Y.-M. (2007). Corporate governance and earnings management: The implications of corporate governance best-practice principles for Taiwanese listed companies. *Journal of Contemporary Accounting & Economics*, 3(2), 73-105.

Chen, V. Z., Li, J., M, D., & Shapiro. (2011). Are OECD-prescribed "good corporate governance practices" really good in an emerging economy? *Asia Pacific Journal of Management*, 28(1), 115-138.

Cheng, E., & Courtenay, S. M. (2006).Board composition, regulatory regime and voluntary disclosure. *The International Journal of Accounting, 41*(3), 262-289.

Cheng, S. (2008). Board size and the variability of corporate performance. *Journal of Financial Economics*, 87(1), 157-176.

Chobpichien, J., Haron, H., & Ibrahim, D. (2008). The quality of board of directors, ownership structure and level of voluntary disclosure of listed companies in Thailand. *Euro Asia Journal of Management*, *3*(17), 3-39.

Chung, K. H., & Zhang, H. (2011). Corporate governance and institutional ownership. *Journal of Financial and Quantitative Analysis*, *46*(01), 247-273.

Claessens, S., & Fan, J. P. (2003). Corporate governance in Asia: A survey. *International Review of Finance*, 3(2), 71-103.

Claessens, S., Djankov, S., & Lang, L. H. (2000). The separation of ownership and control in East Asian corporations. *Journal of Financial Economics*, 58(1), 81-112.

Cohen, D. A., Dey, A., & Lys, T. Z. (2008). Real and accrual-based earnings management in the pre-and post-Sarbanes-Oxley periods. *The Accounting Review*, *83*(3), 757-787.

Cohen, J., & Cohen, P. (1983). *Applied multiple regression/correlation analysis for the behavioral sciences* (2nd Ed.). Hillsdale, NJ. Lawrence Erlbaum.

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

Coles, J. L., Daniel, N. D., & Naveen, L. (2008). Boards: Does one size fit all? *Journal of Financial Economics*, 87(2), 329-356.

Collier, P., & Gregory, A. (1996). Audit committee effectiveness and the audit fee. *European Accounting Review*, 5(2), 177-198.

Collins, D. W., Maydew, E. L., & Weiss, I. S. (1997). Changes in the value-relevance of earnings and book values over the past forty years. *Journal of Accounting and Economics*, 24(1), 39-67.

Cooper, B. J. (1993). The audit committee and internal audit. *Managerial Auditing Journal*, 8(3).

Coram, P., Ferguson, C., & Moroney, R. (2008). Internal audit, alternative internal audit structures and the level of misappropriation of assets fraud. *Accounting & Finance*, 48(4), 543-559.

Dahya, J., Dimitrov, O., & McConnell, J. J. (2008). Dominant shareholders, corporate boards, and corporate value: A cross-country analysis. *Journal of Financial Economics*, 87(1), 73-100.

Daily, C. M., Dalton, D. R., & Cannella, A. A. (2003). Corporate governance: Decades of dialogue and data. *Academy of Management Review*, 28(3), 371-382.

Dalton, C. M., & Dalton, D. R. (2005). Boards of directors: Utilizing empirical evidence in developing practical prescriptions. *British Journal of Management*, 16(s1), S91-S97.

Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal*, 42(6), 674-686.

Davidson, R., Goodwin-Stewart, J., & Kent, P. (2005). Internal governance structures and earnings management. *Accounting & Finance*, 45(2), 241-267.

Davis, G. F., & Useem, M. (2002). *Top management, company directors, and corporate control. Handbook of Strategy and Management*, 233-59.

De Miguel, A., Pindado, J., & De La Torre, C. (2004). Ownership structure and firm value: New evidence from Spain. *Strategic Management Journal*, 25(12), 1199-1207.

Dechow, P. M. (1994). Accounting earnings and cash flows as measures of firm performance: The role of accounting accruals. *Journal of Accounting and Economics*, *18*(1), 3-42.

Dechow, P. M., & Dichev, I. D. (2002). The quality of accruals and earnings: The role of accrual estimation errors. *The Accounting Review*, 77(s-1), 35-59.

Dechow, P. M., Hutton, A. P., Kim, J. H., & Sloan, R. G. (2012). Detecting earnings management: A new approach. *Journal of Accounting Research*, 50(2), 275-334.

Dechow, P. M., Kothari, S. P., & Watts, R. L. (1998). The relation between earnings

and cash flows. *Journal of Accounting and Economics*, *25*(2), 133-168.

Dechow, P. M., Richardson, S. A., & Tuna, I. (2003). Why are earnings kinky? An examination of the earnings management explanation. *Review of Accounting Studies*, *8*(2-3), 355-384.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1995). Detecting earnings management. *Accounting Review*, 70(2), 193-225.

Dechow, P. M., Sloan, R. G., & Sweeney, A. P. (1996). Causes and consequences of earnings manipulation: An analysis of firms subject to enforcement actions by the sec. *Contemporary Accounting Research*, 13(1), 1-36.

Dechow, P., Ge, W., & Schrand, C. (2010). Understanding earnings quality: A review of the proxies, their determinants and their consequences. *Journal of Accounting and Economics*, 50(2), 344-401.

DeFond, M. L., & Jiambalvo, J. (1994). Debt covenant violation and manipulation of accruals. *Journal of Accounting and Economics*, 17(1), 145-176.

DeFond, M. L., Hann, R. N., & Hu, X. (2005). Does the market value financial expertise on audit committees of boards of directors? *Journal of Accounting Research*, 43(2), 153-193.

Demsetz, H., & Villalonga, B. (2001). Ownership structure and corporate performance. *Journal of Corporate Finance*, 7(3), 209-233.

Desai, N. K., Gerard, G. J., & Tripathy, A. (2011). Internal audit sourcing arrangements and reliance by external auditors. Auditing: *A Journal of Practice & Theory*, 30(1), 149-171.

DeZoort, F. T., & Salterio, S. E. (2001). The effects of corporate governance experience and financial-reporting and audit knowledge on audit committee members' judgments. *Auditing: A Journal of Practice & Theory*, 20(2), 31-47.

DeZoort, F. T., D. R., Hermanson, D., Archambeault, & Reed, S. (2002). Audit committee effectiveness: A synthesis of the empirical audit committee literature. *Journal of Accounting Literature 21*, 38-75.

Di Pietra, R., Grambovas, C. A., Raonic, I., & Riccaboni, A. (2008). The effects of board size and 'busy' directors on the market value of Italian companies. *Journal of Management & Governance*, 12(1), 73-91.

Dietrich, J. R., Muller III, K. A., & Riedl, E. J. (2007). Asymmetric timeliness tests of accounting conservatism. *Review of Accounting Studies*, 12(1), 95-124.

Dimitropoulos, P. E., & Asteriou, D. (2010). The effect of board composition on the informativeness and quality of annual earnings: Empirical evidence from Greece. *Research in International Business and Finance*, 24(2), 190-205.

Doyle, J. T., Ge, W., & McVay, S. (2007). Accruals quality and internal control over financial reporting. *The Accounting Review*, 82(5), 1141-1170.

Ewert, R., & Wagenhofer, A. (2011). Earnings quality metrics and what they measure. Retrieved from SSRN website: https://mitsloan.mit.edu/groups/template/pdf/Ewart-Wagenhofer.pdf

Ewert, R., & Wagenhofer, A. (2013). Accounting standards, earnings management, and earnings quality. Retrieved from SSRN website: *http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2068134*

Fama, E. F., & Jensen, M. C. (1983).Separation of ownership and control. *Journal of Law and Economics*, 26(2), 301-325.

Fan, J. P., & Wong, T. J. (2002). Corporate ownership structure and the informativeness of accounting earnings in East Asia. *Journal of Accounting and Economics*, 33(3), 401-425.

Financial Accounting Standards Board (FASB). (1980). Concepts Statement No. (2).Qualitative Characteristics of Accounting Information. Norwalk, CT: FASB.

Financial Reporting Council**,** the Smith Guidance on Audit Committees**,** (January 2003) available at: http://www.icaew.com/en/library/subject-gateways/corporate-governance/codes-and-reports/smith-report.

Fischel, D. R. (1982). Corporate governance movement. *Vanderbilt Law Review*, 35(11), 1259-1292.

Florackis, C. (2008). Agency costs and corporate governance mechanisms: evidence for UK firms. *International Journal of Managerial Finance*, 4(1), 37-59.

Flynn, R. S. (2011). Do affiliated former audit partners need to" cool-off" before joining an audit committee? nonprofessional investors speak. *Journal of the Academy of Business & Economics, 11*(3).

Forbes, D. P., & Milliken, F. J. (1999). Cognition and corporate governance: Understanding boards of directors as strategic decision-making groups. *Academy of Management Review*, 24(3), 489-505.

Francis, J., & Schipper, K. (1999). Have financial statements lost their relevance? *Journal of Accounting Research*, 37(2), 319-352.

Francis, J., LaFond, R., Olsson, P. M., & Schipper, K. (2004). Costs of equity and earnings attributes. *The Accounting Review*, 79(4), 967-1010.

Francis, J., LaFond, R., Olsson, P., & Schipper, K. (2005). The market pricing of accruals quality. *Journal of Accounting and Economics*, 39(2), 295-327.

Francis, J., Nanda, D., & Olsson, P. (2008).Voluntary disclosure, earnings quality, and cost of capital. *Journal of Accounting Research*, 46(1), 53-99.

Frankel, R. M., Johnson, M. F., & Nelson, K. K. (2002). The relation between auditors' fees for nonaudit services and earnings management. The Accounting Review, 77(s-1), 71-105.

Frazier, P. A., Tix, A. P., & Barron, K. E. (2004). Testing moderator and mediator effects in counseling psychology research. *Journal of Counseling Psychology*, *51*(1), 115.

Gaio, C. (2010). The relative importance of firm and country characteristics for earnings quality around the world. *European Accounting Review*, 19(4), 693-738.

Gao, P. (2013). A measurement approach to conservatism and earnings management. *Journal of Accounting and Economics*, *55*(2), 251-268.

Garcia, L. S., Barbadillo, E. R., & Perez, M. O. (2010). Audit committee and internal audit and the quality of earnings: empirical evidence from Spanish companies. *Journal of Management & Governance*, 16(2), 305-331.

Garcia, L. S., Barbadillo, E. R., & Perez, M. O. (2012). Audit committee and internal audit and the quality of earnings: empirical evidence from Spanish companies. *Journal of Management & Governance, 16*(2), 305-331.

Ge, W., & McVay, S. (2005). The disclosure of material weaknesses in internal control after the Sarbanes-Oxley Act. *Accounting Horizons*, 19(3), 137-158.

Gedajlovic, E., & Shapiro, D. M. (2002). Ownership structure and firm profitability in Japan. *Academy of Management Journal*, 45(3), 565-575.

Gendron, Y., & Bedard, J. (2006). On the constitution of audit committee effectiveness. *Accounting, Organizations and Society*, *31*(3), 211-239.

George, N. (2003). Audit committees: The solution to quality financial reporting. *The CPA Journal*, 73(12), 6-9.

Glover, S. M., Prawitt, D. F., & Wood, D. A. (2008). Internal audit sourcing arrangement and the external auditor's reliance decision. *Contemporary Accounting Research*, 25(1), 193-213.

Goh, B. W. (2009). Audit committees, boards of directors, and remediation of material weaknesses in internal control. *Contemporary Accounting Research*, 26(2), 549-579.

Gonzalez, J. S., & Garcia-Meca, E. (2014). Does corporate governance influence earnings management in Latin American markets? *Journal of Business Ethics*, *121*(3), 419-440.

Goodstein, J., Gautam, K., & Boeker, W. (1994). The effects of board size and diversity on strategic change. *Strategic Management Journal*, 15(3), 241-250.

Goodwin-Stewart, J., & Kent, P. (2006). Relation between external audit fees, audit committee characteristics and internal audit. *Accounting & Finance*, 46(3), 387-404.

Gorgieva-Trajkovska, O., & Kostadinovski, A. (2012). Financial reporting quality and investment efficiency. *Challenges in Contemporary Economy, IBS Press* 2012.

Gramling, A. A., & Hermanson, D. R. (2006). What role is your internal audit function playing in corporate governance? *Internal Auditing-Boston-Warren Gorham and Lamont Incorporated*, 21(6), 37.

Gramling, A. A., Maletta, M. J., Schneider, A., & Church, B. K. (2004). The role of the internal audit function in corporate governance: A synthesis of the extant internal auditing literature and directions for future research. *Journal of Accounting Literature*, 23(1), 194-244.

Guest, P. M. (2009). The impact of board size on firm performance: evidence from the UK. *The European Journal of Finance*, 15(4), 385-404.

Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2006). *Multivariate data analysis* (6th ed.). Upper Saddle River, N.J.: Pearson Education Inc.

Hair, J.F., Anderson, R.E., Tatham, R.L., and Black, W.C. (1998). *Multivariate Data Analysis*. Engelwood Cliffs, NJ: Prentice-Hall.

Hanlon, M., Rajgopal, S., & Shevlin, T. (2003). Are executive stock options associated with future earnings? *Journal of Accounting and Economics*, 36(1), 3-43.

Haron, H., Jantan, M., & Pheng, E. G. (2005). Audit committee compliance with Kuala Lumpur Stock Exchange listing requirements. *International Journal of Auditing*, 9(3), 187-200.

Haron, H., Jeyaraman, K., & Chye, O. H. (2010). Determinants of internal control characteristics influencing voluntary and mandatory disclosures: A Malaysian perspective. *Managerial Auditing Journal*, 25(2), 140-159.

Hashim, H. A. (2009). *Board of directors, ownership structure, ethnicity and earnings quality: Malaysian evidence.* (Doctoral dissertation, University of Malaya). Retrieved from: http://dspace.fsktm.um.edu.my/handle/1812/742

Hashim, H. A., & Devi, S. S. (2007). Corporate governance, ownership structure and earnings quality: Malaysian evidence. *Research in Accounting and Emerging Economies*, 8, 97-123.

Hassan, M.-H., Moyes, G. D., Mohd-Sanusi, Z., & Iskandar, T. M. (2010). The enforcement role of the companies' commission of Malaysia. *International Business & Economics Research Journal*, 9(2), 135-148.

Hawley, J. P., & Williams, A. T. (2000). *The rise of fiduciary capitalism: How institutional investors can make corporate America more democratic*. University of Pennsylvania Press.

He, L., & Yang, R. (2014). Does industry regulation matter? New evidence on audit committees and earnings management. *Journal of Business Ethics*, *123*(4), 573-589.

Healy, P. M., & Palepu, K. G. (2001). Information asymmetry, corporate disclosure, and the capital markets: A review of the empirical disclosure literature. *Journal of Accounting and Economics*, 31(1), 405-440.

Heath, J., & Norman, W. (2004). Stakeholder theory, corporate governance and public management: what can the history of state-run enterprises teach us in the post-Enron era? *Journal of Business Ethics*, 53(3), 247-265.

Hepworth, S. R. (1953). Smoothing periodic income. *The Accounting Review*, 28(1), 32-39.

Hermalin, B. E., & Weisbach, M. S. (1991). The effects of board composition and direct incentives on firm performance. *Financial Management*, 20(4), 101-112.

Hillman, A. J., & Dalziel, T. (2003). Boards of directors and firm performance: Integrating agency and resource dependence perspectives. *The Academy of Management Review*, 28(3), 383-396.

Hillman, A. J., Withers, M. C., & Collins, B. J. (2009). Resource dependence theory: A review. *Journal of Management*, 35(6), 1404-1427.

Ho, S. S., & Shun Wong, K. (2001). A study of the relationship between corporate governance structures and the extent of voluntary disclosure. *Journal of International Accounting, Auditing and Taxation*, 10(2), 139-156.

Hoitash, R., & Hoitash, U. (2009). The role of audit committees in managing relationships with external auditors after SOX: Evidence from the USA. *Managerial Auditing Journal*, 24(4), 368-397.

Holder-Webb, L., & Sharma, D. S. (2010). The effect of governance on credit decisions and perceptions of reporting reliability. *Behavioral Research in Accounting*, 22(1), 1-20.

Hu, H. W., Tam, O. K., & Tan, M. G. S. (2010).Internal governance mechanisms and firm performance in China. *Asia Pacific Journal of Management*, *27*(4), 727-749.

Hunton, J. E., Hoitash, R., & Thibodeau, J. C. (2011). The relationship between perceived tone at the top and earnings quality. *Contemporary Accounting Research*, *28*(4), 1190-1224.

Hwang, L.-S., & Lee, W.-J. (2012). Do takeover defenses impair equity investors' perception of "higher quality" earnings? *Journal of Accounting, Auditing & Finance*, 27(3), 325-358.

IIA (2010), Standards for the Professional Practice of Internal Auditing, The Institute of Internal Auditors Homepage, Institute of Internal Auditors, Kuala Lumpur, available at: www.theiia.org/guidance/standards-and-practices/professional-practices framework/standards/

Ika, S. R., & Ghazali, N. A. M. (2012). Audit committee effectiveness and timeliness of reporting: Indonesian evidence. *Managerial Auditing Journal*, 27(4), 403-424.

Institute of Internal Auditors (IIA). (1999). Definition of internal audit function. Altamonte Springs, Florida: The Institute of Internal Auditors.

International Accounting and Reporting Issues: 2003 Review, available at: http://unctad.org/en/docs/iteteb20039_en.pdf.

Ismail, T. H., & Elbolok, R. (2011). Do conditional and unconditional conservatism impact earnings quality and stock prices in Egypt?. *Research Journal of Finance and Accounting*, *2*(12), 7-22.

Ismail, W. A. W., Dunstan, K. L., & Van Zijl, T. (2010). Earnings quality and corporate governance following the implementation of Malaysian code of corporate governance. *Available at SSRN*. http://www.researchgate.net/profile/Wan_Adibah_Wan_Ismail/publication/228121833_Earnings_Quality_and_Corporate_Governance_Following_the_Implementation_of_Malaysian_Code_of_Corporate_Governance/links/0deec52d24feac7bff000000.pdf

Jaggi, B., & Leung, S. (2007). Impact of family dominance on monitoring of earnings management by audit committees: Evidence from Hong Kong. *Journal of International Accounting, Auditing and Taxation*, 16(1), 27-50.

James, K. L. (2003). The effects of internal audit structure on perceived financial statement fraud prevention. *Accounting Horizons*, 17(4), 315-327.

Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *The Journal of Finance*, 48(3), 831-880.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360.

Johari, N. H., Mohd Saleh, N., Jaffar, R., & Sabri Hassan, M. (2008). The influence of board independence, competency and ownership on earnings management in

Malaysia. *International Journal of Economics and Management*, 2(2), 281-306.

Johl, S. K., Johl, S. K., Subramaniam, N., & Cooper, B. (2013). Internal audit function, board quality and financial reporting quality: evidence from Malaysia. *Managerial Auditing Journal*, 28(9), 780-814.

Johl, S. K., Kaur, S., & Cooper, B. J. (2015). Board characteristics and firm performance: evidence from Malaysian public listed firms. *Journal of Economics, Business and Management*, *3*(2), 239-243.

Johnson, J. L., Daily, C. M., & Ellstrand, A. E. (1996). Boards of directors: A review and research agenda. *Journal of Management*, 22(3), 409-438.

Jonas, G. J., & Blanchet, J. (2000). Assessing quality of financial reporting. *Accounting Horizons*, 14(3), 353-363.

Jones, J. J. (1991). Earnings management during import relief investigations. *Journal of Accounting Research*, 29(2), 193-228.

Jouber, H., & Fakhfakh, H. (2012). Earnings management and board oversight: an international comparison. *Managerial Auditing Journal*, 27(1), 66-86.

Judge, W. Q., & Zeithaml, C. P. (1992). Institutional and strategic choice perspectives on board involvement in the strategic decision process. *Academy of Management Journal*, 35(4), 766-794.

Kalbers, L. P. (1992). Audit committees and internal auditors. *Internal Auditor*, 49, 37-37.

Kalbers, L. P., & Fogarty, T. J. (1993). Audit committee effectiveness: An empirical investigation of the contribution of power. *Auditing*, 12, 24-24.

Kallunki, J. P., Sahlstrom, P., & Zerni, M. (2007). Propensity to switch auditors and strictness of legal liability environment: the role of audit mispricing. *International Journal of Auditing*, 11(3), 165-185.

Kamardin, H., & Haron, H. (2011). Internal corporate governance and board performance in monitoring roles: evidence from Malaysia. *Journal of Financial Reporting and Accounting*, 9(2), 119-140.

Kang, H., Leung, S., Morris, R.D., & Gray, S.J. (2013). Corporate governance and earnings management: An Australian perspective. *Corporate Ownership and Control*, 10(3 A), 95-113.

Kang, S. A., & Kim, Y. S. (2012). Effect of corporate governance on real activity-based earnings management: Evidence from Korea. *Journal of Business Economics and Management*, *13*(1), 29-52.

Kao, L., & Chen, A. (2004). The effects of board characteristics on earnings management. *Corporate Ownership & Control*, 1(3), 96-107.

Karamanou, I., & Vafeas, N. (2005). The association between corporate boards, audit committees, and management earnings forecasts: An empirical analysis. *Journal of Accounting Research*, 43(3), 453-486.

Kasznik, R. (1999). On the association between voluntary disclosure and earnings management. *Journal of Accounting Research*, 37(1), 57-81.

Katmon, N., & Al Farooque, O. (2015). Exploring the Impact of Internal Corporate Governance on the Relation Between Disclosure Quality and Earnings

Management in the UK Listed Companies. *Journal of Business Ethics*, 1-23.

Kazmier, L. (1996). *Schaum's Outline of Theory and Problems of Business Statistics*. McGraw-Hill, 1996-Business and Economics-410 pages.

Kazmier, L. J. (2003). Schaum's Outline of Business Statistics Schaum. Pub Co.

Keasey, K., & Wright, M. (1993). Issues in corporate accountability and governance: An editorial. *Accounting and Business Research*, 23(sup1), 291-303.

Kesner, I. F., & Johnson, R. B. (1990). An investigation of the relationship between board composition and stockholder suits. *Strategic Management Journal*, 11(4), 327-336.

Kim, J. (2008). A forensic study of Daewoo's corporate governance: Does responsibility for its Meltdown Lie solely with the Chaebol and Korea? *Northwestern Journal of International Law and Business*, 28(2), 273-340.

Kinney, W. R., Palmrose, Z. V., & Scholz, S. (2004). Auditor independence, non-audit services, and restatements: was the us government right? *Journal of Accounting Research*, 42(3), 561-588.

Klein, A. (2002). Audit committee, board of director characteristics, and earnings management. *Journal of Accounting and Economics*, 33(3), 375-400.

Kline, R. B., & Santor, D. A. (1999). Principles & practice of structural equation modelling. *Canadian Psychology*, *40*(4), 381.

Koh, P. S., Laplante, S. K., & Tong, Y. H. (2007). Accountability and value enhancement roles of corporate governance. *Accounting & Finance*, 47(2), 305-333.

Kor, Y. Y. (2003). Experience-based top management team competence and sustained growth. *Organization Science*, 14(6), 707-719.

Kothari, S. P., Leone, A. J., & Wasley, C. E. (2005). Performance matched discretionary accrual measures. *Journal of Accounting and Economics*, 39(1), 163-197.

KPMG Malaysia Fraud Survey Report (2009) available at: http://www.kpmg.com/MY/en/IssuesAndInsights/ArticlesPublications/Documents/2010/KPMG-Malaysia-Fraud-Survey-Report-2009.pdf.

Kraft, A., Lee, B. S., & Lopatta, K. (2014). Management earnings forecasts, insider trading, and information asymmetry. *Journal of Corporate Finance, 26*, 96-123.

Krishnamoorthy, G., Wright, A., & Cohen, J. (2002). Audit committee effectiveness and financial reporting quality: Implications for auditor independence. *Australian Accounting Review*, 12(28), 3-13.

Krishnan, J., & Lee, J. E. (2009). Audit committee financial expertise, litigation risk, and corporate governance. Auditing: *A Journal of Practice & Theory*, 28(1), 241-261.

Krishnan, J., Wen, Y., & Zhao, W. (2011). Legal expertise on corporate audit committees and financial reporting quality. *The Accounting Review*, 86(6), 2099-2130.

Lambert, R. A. (1984). Income smoothing as rational equilibrium behavior. *Accounting Review*, LIX(4), 604-618.

Lanfranconi, C., & Robertson, D. (2002). Corporate financial reporting: The role of the board of directors. *Ivey Business Journal*, *67*(1), 1-3.

Larmou, S., & Vafeas, N. (2010). The relation between board size and firm performance in firms with a history of poor operating performance. *Journal of Management & Governance*, 14(1), 61-85.

Lefort, F., & Urzua, F. (2008). Board independence, firm performance and ownership concentration: Evidence from Chile. *Journal of Business Research*, 61(6), 615-622.

Leng, A. C. A. (2004). The impact of corporate governance practices on firms' financial performance: Evidence from Malaysian companies. *ASEAN Economic Bulletin*, 21(3), 308-318.

Leuz, C., Nanda, D., & Wysocki, P. D. (2003). Earnings management and investor protection: an international comparison. *Journal of Financial Economics*, 69(3), 505-527.

Lev, B. (1989). On the usefulness of earnings and earnings research: Lessons and directions from two decades of empirical research. *Journal of Accounting Research*, 27, 153-192.

Lev, B., & Zarowin, P. (1999). The boundaries of financial reporting and how to extend them. *Journal of Accounting Research*, 37(2), 353-385.

Leys, C., Ley, C., Klein, O., Bernard, P., & Licata, L. (2013). Detecting outliers: Do not use standard deviation around the mean, use absolute deviation around the median. *Journal of Experimental Social Psychology*, *49*(4), 764-766.

Lin, J. W., Li, J. F., & Yang, J. S. (2006). The effect of audit committee performance on earnings quality. *Managerial Auditing Journal*, 21(9), 921-933.

Lin, S., Pizzini, M., Vargus, M., & Bardhan, I. R. (2011). The role of the internal audit function in the disclosure of material weaknesses. *The Accounting Review*, 86(1), 287-323.

Lin, Z., Jiang, Y., Tang, Q., & He, X. (2015). Does high-quality financial reporting mitigate the negative impact of global financial crises on firm performance? Evidence from the United Kingdom. *Australasian Accounting, Business and Finance Journal*, *8*(5), 19-46.

Lipe, R. (1990). The relation between stock returns and accounting earnings given alternative information. *Accounting Review*, 65(1), 49-71.

Lipton, M., & Lorsch, J. (2002). A modest proposal for dealing with the Enron crisis. *Corporate Governance Advisor*, 10(3), 1-4.

Lipton, M., & Lorsch, J. W. (1992). A modest proposal for improved corporate governance. *The Business Lawyer*, 48(1), 59-77.

Liu, Q., & Lu, Z. J. (2007). Corporate governance and earnings management in the Chinese listed companies: A tunneling perspective. *Journal of Corporate Finance*, 13(5), 881-906.

Lu, Y., & Chang, S. (2009). Corporate governance and quality of financial information on the prediction power of financial distress of listed companies in Taiwan. *International Research Journal of Finance and Economics*, 32, 114-138.

Lubatkin, M. H., Schulze, W. S., Ling, Y., & Dino, R. N. (2005). The effects of parental altruism on the governance of family-managed firms. *Journal of Organizational Behavior*, 26(3), 313-330.

Mak, Y. T., & Li, Y. (2001). Determinants of corporate ownership and board structure: evidence from Singapore. *Journal of Corporate Finance*, 7(3), 235-256.

Malaysian Code on Corporate Governance (2000). Finance Committee on Corporate Governance, Securities Commission, Kuala Lumpur. Available at: http://www.google.com

Malaysian Code on Corporate Governance (2012). Finance Committee on Corporate Governance, Securities Commission, Kuala Lumpur. Available at: http://www.google.com

Mansor, N., Che-Ahmad, A., Ahmad-Zaluki, N. A., & Osman, A. H. (2013). Corporate governance and earnings management: A Study on the Malaysian family and non-family owned PLCs. *Procedia Economics and Finance*, *7*, 221-229.

Marra, A., Mazzola, P., & Prencipe, A. (2011). Board monitoring and earnings management pre-and post-IFRS. *The International Journal of Accounting*, *46*(2), 205-230.

McMullen, D. A., & Raghunandan, K. (1996). Enhancing audit committee effectiveness. *Journal of Accountancy*, 18(2), 79-81.

McNichols, M., & Wilson, G. P. (1988). Evidence of earnings management from the provision for bad debts. *Journal of Accounting Research*, 26, 1-31.

Menon, K., & Williams, D. D. (2004). Former audit partners and abnormal accruals. *The Accounting Review, 79*(4), 1095-1118.

Miettinen, J. (2008). *The effect of audit quality on the relationship between audit committee effectiveness and financial reporting quality*. University of Vaasa.

Mohamad, M. H. S., Rashid, H. M. A., & Shawtari, F. A. M. (2012). Corporate governance and earnings management in Malaysian government linked companies: The impact of GLCs' transformation policy. *Asian Review of Accounting*, 20(3), 241-258.

Mohamed, Z., Mat Zain, M., Subramaniam, N., Yusoff, W., & Fadzilah, W. (2012). Internal audit attributes and external audit's reliance on internal audit: implications for audit fees. *International Journal of Auditing*, 16(3), 268-285.

Mohammady, A. (2010). Earnings quality constructs and measures. *The Business Review, Cambridge*, 16(1), 277-283.

Mojtahedi, P. (2013). The impact of intellectual capital on earning quality: evidence from Malaysian firms. *Australian Journal of Basic and Applied Sciences*, 7(2), 535-540.

Morgan, I. (2010). A formalised performance assessment process to improve audit committee performance in South Africa: a conceptual exploration. *Southern African Business Review*, 14(2), 89-117.

Munro, L., & Stewart, J. (2010). External auditors' reliance on internal audit: the impact of sourcing arrangements and consulting activities. *Accounting & Finance*, 50(2), 371-387.

Mustafa, S. T., & Youssef, N. B. (2010). Audit committee financial expertise and misappropriation of assets. *Managerial Auditing Journal*, 25(3), 208-225.

Nagy, A. L., & Cenker, W. J. (2002). An assessment of the newly defined internal audit function. *Managerial Auditing Journal*, 17(3), 130-137.

Nahandi, Y. B., Baghbani, S. M., & Bolouri, A. (2012). Earnings management and accounting conservatism: The case of Iran. *African Journal of Business Management*, 6(19), 6005-6013.

Naiker, V., & Sharma, D. S. (2009). Former audit partners on the audit committee and internal control deficiencies. *The Accounting Review, 84*(2), 559-587.

Naiker, V., Sharma, D. S., & Sharma, V. D. (2013). Do former audit firm partners on audit committees procure greater nonaudit services from the auditor? *The Accounting Review, 88*(1), 297-326.

Nam, S. W., & Nam, I. C. (2004). Corporate Governance in Asia: Recent Evidence from Indonesia, Republic of Korea, Malaysia and Thailand. *Asian Development Bank Institute, Tokyo*. 1-211

Nekhili, M., Fakhfakh, I., Chtioui, T., & Lakhal, F. (2015). Free cash flow and earnings management: The moderating role of governance and ownership. Research Gate, http://www.researchgate.net/profile/Faten_Lakhal/publications

Nichols, D. C., & Wahlen, J. M. (2004). How do earnings numbers relate to stock returns? A review of classic accounting research with updated evidence. *Accounting Horizons*, 18(4), 263-286.

Nicholson, G. J., & Kiel, G. C. (2007). Can directors impact performance? A case-based test of three theories of corporate governance. Corporate Governance: *An International Review*, 15(4), 585-608.

Norwani, N. M., Mohamad, Z. Z., & Chek, I. T. (2011). Corporate governance failure and its impact on financial reporting within selected companies. *International Journal of Business & Social Science*, 21(21), 205-214.

O'Sullivan, M., Percy, M., & Stewart, J. (2008). Australian evidence on corporate governance attributes and their association with forward-looking information in the annual report. *Journal of Management & Governance*, 12(1), 5-35.

Owens-Jackson, L. A., Robinson, D., & Shelton, S. W. (2009). The association between audit committee characteristics, the contracting process and fraudulent financial reporting. *American Journal of Business*, 24(1), 57-66.

Ow-Yong, K., & Kooi Guan, C. (2000). Corporate governance codes: A comparison between Malaysia and the UK. Corporate Governance: *An International Review*, 8(2), 125-132.

Pae, J. (2005). Expected accrual models: the impact of operating cash flows and reversals of accruals. *Review of Quantitative Finance and Accounting*, *24*(1), 5-22.

Park, Y. W., & Shin, H.-H.(2004). Board composition and earnings management in Canada. *Journal of Corporate Finance*, 10(3), 431-457.

Patro, B., & Pattanayak, J. K. (2014).Detecting earnings management using accrual-based models: An empirical study with reference to Coal India Ltd. *The IUP Journal of Accounting Research & Audit Practices*, *13*(2), 53-64.

Peasnell, K. V., Pope, P. F., & Young, S. (2000). Detecting earnings management using cross-sectional abnormal accruals models. *Accounting and Business Research*, 30(4), 313-326.

Peasnell, K. V., Pope, P. F., & Young, S. (2005). Board monitoring and earnings management: do outside directors influence abnormal accruals? *Journal of Business Finance & Accounting*, 32(7-8), 1311-1346.

Penman, S. H., & Zhang, X.-J. (2002). Accounting conservatism, the quality of earnings, and stock returns. *The Accounting Review*, 77(2), 237-264.

Petra, S. T. (2007). The effects of corporate governance on the informativeness of earnings. *Economics of Governance*, 8(2), 129-152.

Pfeffer, J. (1972). Size and composition of corporate boards of directors: The organization and its environment. *Administrative Science Quarterly*, 17(2), 218-228.

Pfeffer, J. (1973). Size, composition, and function of hospital boards of directors: A study of organization-environment linkage. *Administrative Science Quarterly*, 18(3), 349-364.

Pfeffer, J., & Salancik, G. R. (2003). *The external control of organizations: A resource dependence perspective*: Stanford University Press.

Pomeroy, B., & Thornton, D. B. (2008). Meta-analysis and the accounting literature: The case of audit committee independence and financial reporting quality. *European Accounting Review, 17*(2), 305-330.

Porta, R., Lopez-De-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *The Journal of Finance*, 54(2), 471-517.

Prawitt, D. F., Sharp, N. Y., & Wood, D. A. (2012). Internal audit outsourcing and the risk of misleading or fraudulent financial reporting: Did Sarbanes-Oxley Get It Wrong? *Contemporary Accounting Research*, 29(4), 1109-1136.

Prawitt, D. F., Smith, J. L., & Wood, D. A. (2009). Internal audit quality and earnings management. *The Accounting Review*, 84(4), 1255-1280.

Puat Nelson, S., & Devi, S. (2013). Audit committee experts and earnings quality. *Corporate Governance: The International Journal of Business in Society*, *13*(4), 335-351.

Pucheta-Martínez, M. C., & De Fuentes, C. (2007). The impact of audit committee characteristics on the enhancement of the quality of financial reporting: An empirical study in the Spanish context. Corporate Governance: *An International Review*, 15(6), 1394-1412.

Qin, B. (2007). The influence of audit committee financial expertise on earnings quality: US evidence. *The Icfai Journal of Audit Practice*, 4(3), 8-28.

Radzi, S. N. J. M., Islam, M. A., & Ibrahim, S. (2011). Earning quality in public listed companies: a study on Malaysia exchange for securities dealing and automated quotation. *International Journal of Economics and Finance*, 3(2), 233-244.

Raghunandan, K., Rama, D. V., & Read, W. J. (2001). Audit committee composition, "gray directors," and interaction with internal auditing. *Accounting Horizons*, 15(2), 105-118.

Rahmat, M. M., Iskandar, T. M., & Saleh, N. M. (2009). Audit committee characteristics in financially distressed and non-distressed companies. *Managerial Auditing Journal*, 24(7), 624-638.

Rashid, A., De Zoysa, A., Lodh, S., & Rudkin, K. (2010). Board composition and firm performance: evidence from Bangladesh. *Australasian Accounting Business and Finance Journal*, 4(1), 76-95.

Rayburn, J. (1986). The association of operating cash flow and accruals with security returns. *Journal of Accounting Research*, 24, 112-133.

Razak, N. H., & Palahuddin, S. H. (2014). Corporate governance and earning management: Evidence from 200 Malaysian listed firms from the period of 2007 to 2011. *Corporate Board: Role, Duties and Composition*, 10(1), 6-17.

Rediker, K. J., & Seth, A. (1995). Boards of directors and substitution effects of alternative governance mechanisms. *Strategic Management Journal*, 16(2), 85-99.

Report on Corporate Governance. (1999). Finance Committee on Corporate Governance. Securities Commission, Kuala Lumpur.

Revised Malaysian Code on Corporate Governance (2007). Available online at: http://www.micg.net/brochure/cg2007.pdf

Richardson, S. (2003). Earnings quality and short sellers. *Accounting Horizons*, *17(s-1)*, 49-62.

Rittenberg, L. E. (1999). The effects of internal audit outsourcing on perceived external audit independence. Auditing: *A Journal of Practice & Theory*, 18(s-1), 27-35.

Ronen, J., & Yaari, V. (2008). *Earnings management: emerging insights in theory, practice, and research* (Vol. 3): Springer.

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics*, *42*(3), 335-370.

Rusmin, R., W. Astami, E., & Hartadi, B. (2014). The impact of surplus free cash flow and audit quality on earnings management: The case of growth triangle countries. *Asian Review of Accounting*, *22*(3), 217-232.

Sadique, R. B. M., Clark, M. B., Alias, N., & Roudaki, J. (2010). Corporate fraud: an analysis of Malaysian securities commission enforcement releases. *World Academy of Science*, 66(November 2005), 1213-1222.

Saleh, N. M., Iskandar, T. M., & Rahmat, M. M. (2005). Earnings management and board characteristics: Evidence from Malaysia. *Jurnal Pengurusan*, 24(4), 77-103.

Saleh, N. M., Iskandar, T. M., & Rahmat, M. M. (2007). Audit committee characteristics and earnings management: evidence from Malaysia. *Asian Review of Accounting*, 15(2), 147-163.

Saleh, N. M., Jaffar, R., & Yatim, P. (2013). Family ownership, related-party transactions and earnings quality. *Asian Academy of Management Journal of Accounting and Finance*, *9*(1), 129-153.

Salleh, N. M. Z. N., & Haat, M. H. C (2014). Audit committee and earnings management: Pre and Post MCCG. *International Review of Management and Business Research,* 3 (1), 307-318

Salleh, Z., Stewart, J., & Manson, S. (2006). The impact of board composition and ethnicity on audit quality: Evidence from Malaysian companies. *Malaysian Accounting Review*, 5(2), 61-83.

Sanders, W. G., & Carpenter, M. A. (1998). Internationalization and firm governance: The roles of CEO compensation, top team composition, and board structure. *Academy of Management Journal*, 41(2), 158-178.

Sarbanes-Oxley Act (2002) available at: http://www.soxlaw.com/index.htm.

Sarkar, J., Sarkar, S., & Sen, K. (2008). Board of directors and opportunistic earnings management: evidence from India. *Journal of Accounting, Auditing & Finance*, 23(4), 517-551.

Scarbrough, D. P., Rama, D. V., & Raghunandan, K. (1998). Audit committee composition and interaction with internal auditing: Canadian Evidence. *Accounting Horizons*, 12, 51-62.

Schipper, K., & Vincent, L. (2003). Earnings Quality. *Accounting Horizons*, 17(s-1), 97-110.

Sejati, Y. A. (2009). *Political Connections and Earnings Quality: Evidence from Malaysia*. E-theses, Oklahoma State University.

Sekaran, U. (2000). *Research methods for business: A skill building approach*. (3th Ed.). USA: John Wiley & Sons Inc.

Setia-Atmaja, L. Y. (2009). Governance mechanisms and firm value: The impact of ownership concentration and dividends. Corporate Governance: *An International Review*, 17(6), 694-709.

Sharma, V. D., & Kuang, C. (2014). Voluntary audit committee characteristics, incentives, and aggressive earnings management: Evidence from New Zealand. *International Journal of Auditing*, *18*(1), 76-89.

Sharma, V. D., Sharma, D. S., & Ananthanarayanan, U. (2011). Client importance and earnings management: the moderating role of audit committees. *Auditing: A Journal of Practice & Theory*, *30*(3), 125-156.

Shawtari, F. A., Mohammed, M. H. S., & Abdul, H. M. (2015). Corporate Governance Mechanisms and Unmanaged Earnings: Empirical Evidence from Malaysian Government Linked Companies. *Corporate Board: Role, Duties & Composition*, 11, (2), 98-111.

Shiri, M. M., Vaghfi, S. H., Soltani, J., & Esmaeli, M. (2012). Corporate governance and earning quality: Evidence from Iran. *Middle-East Journal of Scientific Research*, 11(6), 702-708.

Shleifer, A., & Vishny, R. W. (1986). Large shareholders and corporate control. *The Journal of Political Economy*, 94(3), 461-488.

Siagian, F. T., & Tresnaningsih, E. (2011). The impact of independent directors and independent audit committees on earnings quality reported by Indonesian firms. *Asian Review of Accounting*, 19(3), 192-207.

Simon, J. (2001). Ethical perceptions of earnings management in Malaysia, Singapore, Hong Kong, Thailand, and the UK. *Asian Review of Accounting*, 9(1), 1-28.

Siregar, S. V., & Utama, S. (2008). Type of earnings management and the effect of ownership structure, firm size, and corporate-governance practices: Evidence from Indonesia. *The International Journal of Accounting*, 43(1), 1-27.

Soliman, M. M., & Ragab, A. A. (2014). Audit committee effectiveness, audit quality and earnings management: An empirical study of the listed companies in Egypt. *Research Journal of Finance and Accounting*, *5*(2), 155-166.

Spekle, R. F., van Elten, H. J., & Kruis, A.-M. (2007). Sourcing of internal auditing: An empirical study. *Management Accounting Research*, 18(1), 102-124.

Strawser, J., O'Shaughnessy, J., & Siegel, P. (1995). Reducing the incidence of fraudulent financial reporting: Evaluating the Treadway Commission recommendations and potential legislation. *Research in Accounting Regulation*, 9(1), 83-104.

Sun, J. (2005).*Financial reporting quality, capital allocation efficiency, and financing structure: An international study*. Unpublished Ph.D., University of Colorado at Boulder, United States - Colorado.

Sun, L. (2012). Executive compensation and contract-driven earnings management. *Asian Academy of Management Journal of Accounting & Finance*, *8*(2), 111-127.

Tabachnick, B. G., and L. S. Fidell. 2007. *Using Multivariate Statistics* (5th ed.). USA: Pearson Education Inc.

Tasios, S., & Bekiaris, M. (2012). Auditor's perceptions of financial reporting quality: the case of Greece. *International Journal of Accounting and Financial Reporting*, 2(1), 57-74.

Teoh, S. H., Welch, I., & Wong, T. J. (1998). Earnings management and the underperformance of seasoned equity offerings. *Journal of Financial economics*, 50(1), 63-99.

The Central Bank and the Financial System in Malaysia (1999) Report. (online) Available: http://www.bnm.gov.my

The World Bank Report (2005) available: http://web.worldbank.org

Thillainathan, R. (1999). A review of corporate governance in Malaysia with special reference to shareholders and creditor rights. *Malaysian Journal of Economic Studies*, 35(1/2), 161-198.

Thomsen, S., & Pedersen, T. (2000). Ownership structure and economic performance in the largest European companies. *Strategic Management Journal*, 21(6), 689-705.

Trueman, B., & Titman, S. (1988). An explanation for accounting income smoothing. *Journal of Accounting Research*, 26, 127-139.

Turley, S., & Zaman, M. (2004). The corporate governance effects of audit committees. *Journal of Management and Governance, 8*(3), 305-332.

Uwuigbe, U., Peter, D. S., & Oyeniyi, A. (2014). The effects of corporate governance mechanisms on earnings management of listed firms in Nigeria. *Journal of Accounting and Management Information Systems*, *13*(1), 159-174.

Uzun, H., Szewczyk, S. H., & Varma, R. (2004). Board composition and corporate fraud. *Financial Analysts Journal*, 60(3), 33-43.

Vafeas, N. (1999). Board meeting frequency and firm performance. *Journal of Financial Economics*, 53(1), 113-142.

Vafeas, N. (2000). Board structure and the informativeness of earnings. *Journal of Accounting and Public Policy*, 19(2), 139-160.

Vafeas, N. (2005). Audit committees, boards, and the quality of reported earnings. *Contemporary Accounting Research*, 22(4), 1093-1122.

Valipour, H., Talebnia, G., & Javanmard, S. A. (2011). The interaction of income smoothing and conditional accounting conservatism: Empirical evidence from Iran. *African Journal of Business Management*, 5(34), 13302-13308.

Vecchio, S. C., & Clinton, B. D. (2003). Co-sourcing and other alternatives in acquiring internal auditing services. *Internal Auditing-Boston-Warren Gorham and Lamont Incorporated-*, 18(3), 33-39.

Veronica, S., & Bachtiar, Y. (2005). Corporate governance, information asymmetry, and earnings management. *Jurnal Akuntansi dan Keuangan Indonesia*, *2*(1), 77-106.

Volpe, R., & Woodlock, P. (2008). A survey of board financial literacy. *Corporate Finance Review*, 12(5), 16-21.

Walker, R. (2004). Gaps in guidelines on audit committees. *Abacus*, 40(2), 157-192.

Wang, D. (2006). Founding family ownership and earnings quality. *Journal of Accounting Research*, 44(3), 619-656.

Wan-Hussin, W. N., & Bamahros, H. M. (2013). Do investment in and the sourcing arrangement of the internal audit function affect audit delay?. *Journal of Contemporary Accounting & Economics*, *9*(1), 19-32.

Ward, A. J., Brown, J. A., & Rodriguez, D. (2009).Governance bundles, firm performance, and the substitutability and complementarity of governance mechanisms. Corporate Governance: *An International Review*, 17(5), 646-660.

Warfield, T. D., Wild, J. J., & Wild, K. L. (1995). Managerial ownership, accounting choices, and informativeness of earnings. *Journal of Accounting and Economics*, *20*(1), 61-91.

Watts, R. L. (2003). Conservatism in accounting part I: Explanations and implications. *Accounting Horizons*, 17(3), 207-221.

West, S. G., Aiken, L. S., & Krull, J. L. (1996). Experimental personality designs: Analyzing categorical by continuous variable interactions. *Journal of personality*, *64*, 1-48.

Xie, B., Davidson, W. N., & DaDalt, P. J. (2003). Earnings management and corporate governance: the role of the board and the audit committee. *Journal of Corporate Finance*, 9(3), 295-316.

Xu, Z., Taylor, G., & Dugan, M. (2007). Review of real earnings management literature. *Journal of Accounting Literature*, *26*, 195-228.

Yang, J. S., & Krishnan, J. (2005).Audit committees and quarterly earnings management. *International Journal of Auditing*, 9(3), 201-219.

Yassin, F. M., & Nelson, S. P. (2012). Audit committee and internal audit: implication on audit quality. *International Journal of Economics, Management and Accounting*, 20(2), 187-218.

Yatim, P., Kent, P., & Clarkson, P. (2006). Governance structures, ethnicity, and audit fees of Malaysian listed firms. *Managerial Auditing Journal*, 21(7), 757-782.

Ye, K. (2014). Independent director cash compensation and earnings management. *Journal of Accounting and Public Policy*, *33*(4), 391-400.

Yermack, D. (1996). Higher market valuation of companies with a small board of directors. *Journal of Financial Economics*, 40(2), 185-211.

Ying, Kuek Chee. "Shareholder Activism through Exit and Voice Mechanisms in Malaysia: A Comparison with the Australian Experience." *Bond L. Rev.* 26 (2014): 87.

Yoon, S. S., & Miller, G. (2002). Earnings management of seasoned equity offering firms in Korea. *The international journal of accounting*, 37(1), 57-78.

Yoon, S. S., Miller, G., & Jiraporn, P. (2006). Earnings management vehicles for Korean firms. *Journal of International Financial Management & Accounting*, 17(2), 85-109.

Yu, F. F. (2008). Analyst coverage and earnings management. *Journal of Financial Economics*, *88*(2), 245-271.

Yunos, R. M. (2011). *The effect of ownership concentration, Board of Directors, Audit Committee and ethnicity on conservative accounting: Malaysian*

evidence (Doctoral dissertation, Edith Cowan University). Retrieved from: http://ro.ecu.edu.au/theses/155

Yunos, R. M., Smith, M., & Ismail, Z. (2010). Accounting conservatism and ownership concentration: Evidence from Malaysia. *Journal of Business and Policy Research*, 5(2), 1-15.

Yusof, M. (2010). Does audit committee constraint discretionary accruals in MESDAQ Listed Companies? *International Journal of Business and Social Science* 1(3), 124-136

Zahra, S. A., & Pearce, J. A. (1989). Boards of directors and corporate financial performance: A review and integrative model. *Journal of Management*, 15(2), 291-334.

Zain, M. M., & Subramaniam, N. (2007). Internal auditor perceptions on audit committee interactions: a qualitative study in Malaysian public corporations. Corporate Governance: *An International Review*, 15(5), 894-908.

Zaman, M., Hudaib, M., & Haniffa, R. (2011). Corporate governance quality, audit fees and non-audit services fees. *Journal of Business Finance & Accounting*, 38(1-2), 165-197.

Zeng, T. (2014). Earnings management around tax rate reduction: evidence from China's 2007 corporate tax reform. *Asian Review of Accounting*, *22*(3), 304-317.

Zhang, Y., Zhou, J., & Zhou, N. (2007).Audit committee quality, auditor independence, and internal control weaknesses. *Journal of Accounting and Public Policy*, 26(3), 300-327.

Zhou, J. (2008). *Earnings quality, analysts, institutional investors and stock price synchronicity* (Doctoral dissertation, The Hong Kong Polytechnic University). Available at: http://repository.lib.polyu.edu.hk/jspui/handle/10397/3692.

Zou, K. H., Tuncali, K., & Silverman, S. G. (2003). Correlation and simple linear regression 1. *Radiology*, *227*(3), 617-628.

Appendix: A

Model One: Multiple Regression Results of DA2 Scaled by Lagged Total Assets

$DA2 = \beta_0 + \beta_1$ BDSIZE + β_2 BIND + β_3 BOD-MEET + β_4 BD-EXPERT + β_5 ACSIZE + β_6 ACIND + β_7 ACMEET + β_8 ACEXPERT + β_9 ACCHPAR + β_{10} IAFINV + β_{11} IAFSOU + β_{12} FSIZE + β_{13} ROA + β_{14} LEV + β_{15} BIG04 + β_{16} OWCO + β_{17} LOSS + β_{18} Growth + e.

	Predicted	**Yoon et al. (2006) DA2**	
Variables	**Sign**	**Coef.**	**t-stat.**
_cons	+/-	0.1090***	5.86
BDSIZE	-	-0.0000	0.00
BDIND	-	0.0167	1.04
BDMEET	-	0.0016*	1.83
BDEXPERT	-	0.0109	1.01
ACZIE	-	0.0038	1.11
ACIND	-	-0.0091	-0.84
ACMEET	-	0.0004	0.29
ACEXPERT	-	-0.0096	-1.11
ACCHPAR	-	0.0028	0.99
IAFSOU	+/-	0.0015	0.44
IAFINV	-	-0.0005	-0.25
ROA	-	-0.0970**	-2.36
LEV	+	0.0159**	1.97
OWCO	+	0.0002*	1.69
FSIZE	-	-0.0058***	-3.66
BIG4	-	-0.0055*	-1.88
LOSS	+	0.0029	0.58
SGROWTH	+	0.0171***	3.10
YEARS	+/-	Included	
INDUSTRYS	+/-	Included	
F-value		5.42	
Sig		0.000	
R^2		0.0869	
N		2036	

Where: *, **, *** = p-value < .10, .05, .01, respectively, DA2 = extended m-Jones model by Yoon et al. (2006), BDSIZE = board size, BDIND = board independence, BDMEET = board meetings, BDEXPERT = board financial expertise, ACSIZE = audit committee size, ACIND = audit committee independent, ACMEET = audit committee meeting, ACEXPERT = audit committee financial expertise, ACCHPAR = audit committee chairman audit partner, IAFSOU = internal audit function sourcing arrangement, IAFINV = investment in internal audit function, ROA = return on assets, LEV = leverage, OWCO5 = ownership concentration, FSIZE = firm size, BIG4 = audit quality, LOSS = net loss, SGROWTH = sales growth.

Appendix: B

Multiple Regression Results of Board of Directors and Audit Committee Expertise Separately

	DA1		DA2		DA1		DA2	
	Coef.	**t-stat.**	**Coef.**	**t-stat.**	**Coef.**	**t-stat.**	**Coef.**	**t-stat.**
_cons	0.105***	8.91	0.177***	2.75	0.108***	8.85	0.236***	3.56
BDEXPERT	0.00900	1.21	0.0846*	1.88				
ACEXPERT					0.00111	0.19	-0.0448	-1.4
ROA	-0.0914**	-2.54	-0.640***	-3.75	-0.0920**	-2.55	-0.0845	-0.52
FSIZE	-0.00435***	-4.97	-0.00676	-1.4	-0.00440***	-4.98	-0.0107**	-2.16
LOSS	0.0131***	2.81	0.0553**	1.99	0.0132***	2.84	0.128***	4.37
LEV	0.0101	1.48	0.00610	0.15	0.0102	1.5	0.0457	1.05
SGROWTH	0.00657	1.53	-0.0388	-1.49	0.00646	1.5	-0.0549**	-2.06
OWCO	0.000117	1.53	0.000217	0.52	0.000119	1.56	0.000145	0.34
BIG4	-0.00358	-1.42	-0.0206	-1.38	-0.00355	-1.41	-0.0247*	-1.65
YEARS	Included		Included		Included		Included	
INDUSTRYS	Included		Included		Included		Included	
F-value	12.26		24.31		12.15		24.28	
R2	0.1154		0.2448		0.1148		0.2292	
N	2036		2036		2036		2036	

Appendix: C

Model One: Multiple Regression Results for Separate Years

	2009		2010		2011		2012	
	DA1	DA2	DA1	DA2	DA1	DA2	DA1	DA2
BDSIZE	-0.0005	-0.0086	-0.0012	-0.0119	-0.0004	-0.0077	0.0010	-0.0046
	(-0.34)	(-0.92)	(-0.92)	(-1.38)	(-0.26)	(-0.79)	(0.48)	(-0.43)
BDIND	0.0077	0.2420	-0.0102	0.1270	0.0205	0.2050	0.0133	0.2200
	(0.28)	(1.41)	(-0.45)	(0.83)	(0.88)	(1.16)	(0.42)	(1.22)
BDMEET	0.0005	-0.0065	-0.0004	-0.0010	0.0023*	0.0168*	0.0010	0.0132
	(0.24)	(-0.70)	(-0.30)	(-0.14)	(1.69)	(1.65)	(0.61)	(1.38)
BDEXPERT	-0.0083	0.1290	0.0014	0.0815	0.0202	0.0870	0.0152	0.2720**
	(-0.42)	(1.11)	(0.08)	(0.80)	(1.22)	(0.75)	(0.80)	(2.36)
ACZIE	0.0064	0.0235	0.0028	0.0324	-0.0029	0.0011	0.0059	-0.0270
	(1.04)	(0.62)	(0.56)	(1.01)	(-0.60)	(0.03)	(0.92)	(-0.75)
ACIND	-0.0036	0.0901	-0.0014	0.0069	-0.0230	-0.0344	-0.0158	-0.0323
	(-0.19)	(0.91)	(-0.08)	(0.07)	(-1.45)	(-0.33)	(-0.79)	(-0.30)
ACMEET	0.0000	0.0307*	-0.0019	0.0201	-0.0005	0.0033	-0.0007	0.0162
	(0.00)	(1.84)	(-1.00)	(1.48)	(-0.21)	(0.23)	(-0.30)	(0.94)
ACEXPERT	0.0178	-0.1270	-0.0124	-0.1600**	0.0001	-0.0007	-0.0079	-0.1220
	(1.21)	(-1.60)	(-0.93)	(-2.03)	(0.01)	(-0.01)	(-0.53)	(-1.59)
ACCHPAR	-0.0025	-0.0007	0.0095*	0.0356	0.0013	0.0176	0.0103*	0.0136
	(-0.48)	(-0.02)	(1.90)	(1.19)	(0.29)	(0.62)	(1.95)	(0.49)
IAFSOU	-0.0009	0.0481	-0.0070	0.0054	-0.0025	0.0216	0.0041	0.0569
	(-0.16)	(1.34)	(-1.37)	(0.16)	(-0.45)	(0.61)	(0.57)	(1.44)
IAFINV	0.0005	-0.0305	0.0037	-0.0193	-0.0002	-0.0370**	-0.0017	-0.0534***
	(0.15)	(-1.51)	(1.17)	(-0.95)	(-0.07)	(-1.99)	(-0.50)	(-2.59)
ROA	-0.1190	-0.8370**	-0.0675	-0.5830*	-0.1290**	-0.6090	-0.0243	-0.3060
	(-1.64)	(-2.48)	(-0.96)	(-1.80)	(-2.04)	(-1.50)	(-0.33)	(-1.03)
FSIZE	-0.0061**	-0.0045	-0.0030	0.0097	-0.0016	0.0180	-0.0080***	0.0158
	(-1.97)	(-0.26)	(-1.25)	(0.66)	(-0.65)	(1.19)	(-2.90)	(1.00)
LOSS	0.0108	0.0197	0.0091	0.0751	0.0033	0.0523	0.0317***	0.0332
	(1.15)	(0.37)	(1.07)	(1.38)	(0.44)	(0.85)	(3.13)	(0.66)
LEV	0.0111	0.0048	0.0010	-0.1170	-0.0015	-0.0293	0.0269*	0.1400*
	(0.83)	(0.06)	(0.07)	(-1.52)	(-0.13)	(-0.36)	(1.88)	(1.75)
SGROWH	0.0003	-0.0187	-0.0021	-0.0705	0.0069	-0.0776	0.0158	-0.0114
	(0.04)	(-0.37)	(-0.29)	(-1.38)	(0.95)	(-1.49)	(1.62)	(-0.22)
OWCO	0.0004***	0.0015*	-0.00002	-0.0007	0.0001	0.00003	-0.0001	0.0006
	(2.64)	(1.72)	(-0.15)	(-0.85)	(0.90)	(0.04)	(-0.42)	(0.72)
BIG4	-0.0026	0.0155	-0.0109**	-0.0471	0.0013	-0.0119	-0.0056	-0.0249
	(-0.49)	(0.53)	(-2.26)	(-1.48)	(0.29)	(-0.44)	(-1.00)	(-0.81)
_cons	0.0914***	0.1220	0.0846***	0.2220	0.0782***	0.1730	0.1380***	0.2730
	(2.63)	(0.65)	(2.78)	(1.44)	(2.65)	(1.02)	(4.01)	(1.60)
F-value	4.61	5.34	2.12	4.81	2.58	6.43	4.97	6.94
R^2	0.1567	0.2803	0.1011	0.2639	0.1623	0.2930	0.1996	0.3115

Appendix: D

Model Two: Multiple Regression Results for Separate Years

	2009		2010		2011		2012	
	DA1	DA2	DA1	DA2	DA1	DA2	DA1	DA2
BDSCOR	0.0019	-0.0013	-0.0015	-0.0101	0.0024	0.0103	0.0010	0.0026
	(0.93)	(-0.11)	(-0.64)	(-0.75)	(1.18)	(0.75)	(0.34)	(0.19)
ACScore	0.0008	0.0118	0.0020	0.0211	0.0008	0.0162	0.0036	0.0054
	(0.37)	(0.87)	(0.91)	(1.52)	(0.43)	(1.26)	(1.47)	(0.38)
IAFSOU	-0.0007	0.0590	-0.0073	0.000448	-0.0045	0.0149	0.0042	0.0558
	(-0.11)	(1.61)	(-1.42)	(0.01)	(-0.84)	(0.42)	(0.59)	(1.40)
IAFINV	0.0004	-0.0332*	0.0029	-0.0149	0.0003	-0.0352*	-0.0017	-0.0486**
	(0.10)	(-1.67)	(0.92)	(-0.73)	(0.13)	(-1.74)	(-0.50)	(-2.35)
ROA	-0.1210*	-0.805**	-0.0671	-0.620*	-0.144**	-0.699*	-0.0263	-0.4620
	(-1.65)	(-2.38)	(-0.95)	(-1.83)	(-2.27)	(-1.81)	(-0.36)	(-1.60)
FSIZE	-0.0065**	-0.0025	-0.0027	0.0104	-0.0026	0.0131	-0.0080***	0.0126
	(-2.14)	(-0.16)	(-1.15)	(0.73)	(-1.13)	(0.85)	(-2.99)	(0.81)
LOSS	0.0102	0.0451	0.0090	0.0895	0.0031	0.0573	0.0307***	0.0245
	(1.09)	(0.85)	(1.03)	(1.61)	(0.41)	(0.94)	(3.04)	(0.49)
LEV	0.0107	0.0113	-0.0001	-0.117	0.0001	-0.0129	0.0285*	0.1470*
	(0.81)	(0.15)	(-0.01)	(-1.52)	(0.01)	(-0.15)	(1.94)	(1.85)
SGROWH	0.0011	-0.0107	-0.0030	-0.0671	0.0053	-0.0865	0.0150	-0.0201
	(0.14)	(-0.21)	(-0.43)	(-1.32)	(0.71)	(-1.59)	(1.54)	(-0.39)
OWCO	0.0004***	0.0013	-0.00003	-0.000818	0.0001	-0.0001	-0.0001	0.0005
	(2.78)	(1.50)	(-0.21)	(-1.02)	(1.03)	(-0.08)	(-0.39)	(0.62)
BIG4	-0.0026	0.0113	-0.0103**	-0.0496	0.0029	-0.0026	-0.0050	-0.0222
	(-0.49)	(0.37)	(-2.15)	(-1.58)	(0.66)	(-0.09)	(-0.91)	(-0.72)
_cons	0.117***	0.412**	0.0715***	0.299*	0.0741***	0.326**	0.155***	0.398**
	(4.07)	(2.42)	(2.76)	(1.92)	(3.23)	(2.04)	(5.32)	(2.53)
F-value	6.03	6.28	2.49	5.94	2.77	8.05	6.75	8.21
R^2	0.1533	0.2530	0.0902	0.2440	0.1477	0.2740	0.1906	0.2804
N	509	509	509	509	509	509	509	509

Appendix: E

Multiple Regression Results of Explenation Power of Discretionary Accruals Models

	Jones		Dechow		Kasznik		Kothari		Yoon	
Variables	Coefficient	t.stat	Coefficient	t.stat	Coefficient	t.stat	Coefficient	t.stat	Coefficient	t.stat
_cons	-0.0456***	-4.38	-0.0138***	-3.05	0.0178***	3.73	-0.0514***	-4.85	0.0852	1.57
1/TA	7678.0***	10.36	-422.60	-1.19	-1028.0***	-2.95	7867.2***	10.59		
ΔREVi– ΔRECi/TA	0.0688***	3.34	0.0240**	2.39	0.0313***	3.16	0.0676***	3.26		
PPE/TA	-0.0524***	-2.58	-0.0308***	-3.52	-0.0248***	-2.88	-0.0500**	-2.46		
CF/TA					-0.452***	-16.76				
ROA							0.110***	2.89		
ΔREVi– ΔRECi/REV									-0.0924***	-19.91
Δ EXPi – ΔPAYi/REV									0.132***	23.50
DEPi+ RETi/REV									-3.854***	-29.95
F-Value	43.82***		6.29***		74.94***		35.06***		613.74***	
R2	0.0604		0.0092		**0.1282**		0.0644		**0.4746**	
N	2048		2040		2044		2044		2036	

LIST OF PUBLICATIONS

Al-Rassas, A. H., & Kamardin, H. (2015). Directors' Independence, Ownership Concentration and Earnings Quality in Malaysia. Australian Journal of Basic and Applied Sciences, 9(9) 70-77. (ISI)

Al-Rassas, A. H., & Kamardin, H. (2015). Internal and External Audit Attributes, Audit Committee Characteristics, Ownership Concentration and Earnings Quality: Evidence from Malaysia. *Mediterranean Journal of Social Sciences, 6* (3) 458-470. (Scopus Indexing)

Al-Rassas, A. H., & Kamardin, H. (2015). Directors' Independence, Internal Audit Function, Ownership Concentration and Earnings Quality in Malaysia. *Asian Social Science*, 11 (15) 244-256. (Scopus Indexing)

Al-Rassas, A. H., & Kamardin, H. (2016). Earnings Quality and Audit Attributes in High Concentrated Ownership Market. *Corporate Governance: The International Journal of Business in Society*, 2(16), (Emerald publisher and Scopus Indexing).

INTERNATIONAL CONFERENCES

Al-Rassas, A. H., & Kamardin, H. (2015). Directors' Independence, Ownership Concentration and Earnings Quality in Malaysia: IPN - IWNEST2015 Conferences, 6-7, March 2015, Hotel Amaroosa Bandung, Indonesia.