

THE EFFECT OF CORPORATE GOVERNANCE
MECHANISMS AND THEIR INTERACTIONS ON
EARNINGS QUALITY

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FACULTY OF BUSINESS AND ACCOUNTANCY
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EARNINGS QUALITY**

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ABSTRACT

Corporate governance (CG) mechanisms play an essential role in improving financial reporting quality, especially earnings quality. Due to corporate failures around the world, there has been a renewed interest in the effect of CG on earnings quality. The primary objectives of this thesis are to (1) investigate the impact of CG characteristics on earnings quality, and (2) examine whether the interactions between CG mechanisms influence earnings quality. Based on the agency and resource dependence theories, this study develops and examines ten main hypotheses (23 sub-hypotheses) to achieve these objectives. This study identifies CG mechanisms such as the board of directors, audit committee, external audit, and internal audit as well as the interaction among them. Earnings quality is measured using primary qualitative characteristics of accounting information (relevance and faithful representation of earnings) defined by FASB's/IASB's Conceptual Framework (2010). Relevance is operationalised by predictive value (PV) and confirmatory value (feedback value) (FV) of earnings. Faithful representation is defined by neutrality's concept using abnormal accrual. The analysis utilises panel data of 484 non-financial firms listed on the Malaysian Stock Exchanges for years 2007-2013. This study tests hypotheses using univariate and multivariate techniques. The appropriate regression model is Generalised Least Square (GLS). Further analyses, such as specification tests and sensitivity tests (OLS regression), are conducted. The results show that all board characteristics have a significant effect on PV and FV of earnings. However, board size has a negative association with them. All board characteristics have a significant relationship with neutrality except for board meetings frequency. However, the direction is positive for board independence and non-CEO duality. Board quality has a significant positive association with earnings quality. Audit committee independence and meetings frequency show a significant and positive influence on PV. Except for the audit committee meeting, none of the audit committee characteristics affects FV. Audit

committee meetings frequency and independence are significantly and positively, while audit committee size is significantly and negatively related to the neutrality of earnings. Audit committee expertise is not associated with the neutrality of earnings. Audit committee quality is positively associated with earnings quality. Internal audit experience has a significant positive impact on PV and neutrality of earnings, while there is no significant relationship between that and FV. Internal audit independence is negatively and significantly related to PV, FV, and neutrality of earnings. Internal audit quality also has no significant influence on PV and FV but has a significant negative effect on the neutrality of earnings. All external audit characteristics are positively and significantly related to PV. However, regarding FV and neutrality, there is no significant relationship between external audit size and them. External audit quality is significantly and positively related to earnings quality. Interactions between CG mechanisms have joint effects on earnings quality except for the interaction between board and internal audit quality, which follows substitution effects. This study contributes to the existing literature by using interaction among CG mechanisms and describing earnings quality based on FASB's/IASB's Conceptual Framework. The findings could be useful to users of accounting information, standard-setters, and regulators in reconsidering how the quality of monitoring mechanisms is improved and thus promote the fundamental qualitative characteristics of earnings.

Keywords: Corporate Governance, Interaction Effects, Earnings quality, Relevance, Faithful Representation

ABSTRAK

Tadbir Urus Korporat dianggap sebagai faktor yang paling penting dalam menilai dan memantau kualiti pelaporan kewangan, terutamanya kualiti pendapatan. Kegagalan bidang korporat di seluruh dunia, didapati mempunyai kesan urus korporat terhadap kualiti pendapatan. Objektif utama laporan ini adalah untuk (1) mengkaji kesan ciri-ciri urus korporat terhadap kualiti pendapatan, dan (2) meneliti jika interaksi antara mekanisme Urus Korporat mempunyai pengaruh terhadap kualiti pendapatan. Untuk mencapai objektif ini, berdasarkan teori Agensi dan pergantungan sumber, 10 hipotesis utama (23 sub-hipotesis) telah diteliti. Kajian ini mengenal pasti mekanisme urus korporat iaitu Lembaga Jawatankuasa Audit, Audit luaran, Audit dalaman serta interaksi di antara mereka. Kualiti pendapatan juga diukur berdasarkan ciri-ciri kualitatif utama maklumat Perakaunan (Relevan & Perwakilan Setia Pendapatan) yang ditakrifkan oleh rangka kerja FASB/ IASB Conceptual (2010). Perkaitan berdasarkan pada nilai ramalan (PV) & nilai pengesahan (nilai maklum balas) (FV) pendapatan. Lembaga juga ditakrifkan oleh konsep berkecuali diukur dengan akruan yang tidak normal. Analisis adalah berdasarkan Panel Data 484 Syarikat bukan kewangan yang disenaraikan di Bursa Saham Malaysia untuk tahun 2007-2013. Hipotesis diuji menggunakan teknik “univariat” dan “multivariat”. Kaedah statistik untuk persamaan regresi adalah “Generalised Least Square (GLS)”. Ujian spesifikasi dan ujian sensitiviti (OLS Regression) juga diperuntukan. Kesemua lembaga pengarah mempunyai kesan yang besar terhadap pendapatan PV & FV. Saiz lembaga pengarah tidak mempunyai kesan terhadap ujian tersebut. Didapati semua lembaga pengarah mempunyai hubungan neutral kecuali kekerapan mesyuarat. Walau bagaimanapun, hala tuju adalah positif untuk kebebasan lembaga dan bukan dualiti CEO. Kesimpulannya, kualiti lembaga pengarah mempunyai hubungan dan impak yang positif terhadap kualiti pendapatan. Jawatankuasa audit bebas dan kekerapan mesyuarat menunjukkan pengaruh yang besar dan positif terhadap PV. Selain daripada mesyuarat

jawatankuasa audit, ciri-ciri jawatankuasa tidak mempunyai kesan terhadap FV. Kekkerapan mesyuarat jawatankuasa audit bebas adalah positif manakala saiz jawatankuasa audit adalah ketara dan tidak berkaitan dengan pendapatan berkecuali. Kepakaran jawatankuasa audit tidak dikaitkan dengan pendapatan berkecuali. Secara keseluruhan, kualiti jawatankuasa audit adalah dan berkai dengan kualiti pendapatan. Kemahiran audit dalaman mempunyai impak yang positif terhadap PV dan pendapatan berkecuali, manakala tiada hubungan signifikan antara itu dan FV. Audit dalaman bebas adalah negatif dan signifikan terhadap PV, FV dan pendapatan berkecuali. Kualiti audit dalaman juga mempunyai pengaruh yang besar terhadap PV dan FV, tetapi mempunyai kesan ketara dan negatif terhadap pendapatan berkecuali. Airi-ciri audit luaran adalah positif dan signifikan terhadap PV. Walau bagaimanapun, untuk FV dan berkecuali, terdapat hubungan yang signifikan antara mereka dan saiz audit. Secara keseluruhan, kualiti audit luaran adalah ketara dan positi terhadap kualiti pendapatan. Interaksi antara mekanisma urus korporat mempunyai kesan terhadap kualiti pendapatan kecuai interaksi antara lembaga dan kualiti audit dalaman yang mengikut kesan penggantian. Kajian ini menyumbang kepada kesusasteraan yang sedia ada, dengan menggunakan interaksi antara mekanisme urus korporat dan kualiti pendapatan berdasarkan Rangka Kerja Konseptual FASB/ IASB. Hasil kajian dan keputusan boleh membantu pengguna maklumat perakaunan, penetap standard dan pengawai selia berhubung tentang kaedah bagi meningkatkan kualiti mekanisme pemantauan dan menggalakkan ciri-ciri kualitatif asas pendapatan.

Kata Kunci: Tadbir urus korporat, Kesan Interaksi, Kualiti Pendapatan, Relevan, Perwakilan Yang Setia

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LIST OF SYMBOLS AND ABBREVIATIONS

EARN _{i,t}	:	Operating Income before Extraordinary Item and Discontinued Operations
CIA	:	Chief Internal Auditors
1/VIF	:	Tolerance Value
ABNAC	:	Absolute Value of Abnormal Accruals
AC	:	Audit Committee
ACEXP	:	Audit Committee Financial Expertise
ACIND	:	Audit Committee Independence
ACMEET	:	Audit Committee Meetings
ACQ	:	Audit Committee Quality
ACSIZE	:	Audit Committee Size
Adj.	:	Adjusted
AT	:	Agency Theory
BOARD	:	Board of Directors
BODIND	:	Board Independence
BODMEET	:	Board Meetings
BODQ	:	Board Quality
BODSIZE	:	Board Size
BRC	:	Blue Ribbon Committee Report
CAE	:	Chief Audit Executive
CEO	:	Chief Executive Officer
CFO	:	Chief Financial Officer
CG	:	Corporate Governance
CSRC	:	Chinese Securities Regulatory Commission
DAC	:	Discretionary Accruals

EA	:	External Auditing
EAFEE	:	External Audit Fees
EAIND	:	External Audit Independence
EAQ	:	External Audit Quality
EASIZE	:	Auditor Size
ECIIA	:	European Confederation of Institutes of Internal Auditing
EM	:	Earnings Management
EQ	:	Earnings Quality
ERC	:	Earnings Response Coefficient
FASB	:	Financial Accounting Standard Board
FEM	:	Fixed Effects Model
FIRMSIZE	:	Firm Size
FRQ	:	Financial Reporting Quality
FV	:	Feedback Value
GAAP	:	Generally Accepted Accounting Principals
GLS	:	Generalised Least Square
GWTH	:	Firm Growth
H	:	Hypothesis
i	:	Company i
IA	:	Internal Auditing
IAEXP	:	Internal Audit Experience
IAF	:	Internal Audit Function
IAIND	:	Internal Audit Independence
IAQ	:	Internal Audit Quality
IASB	:	International Accounting Standards Board
IFRS	:	International Financial Reporting Standards

IIA	:	Institute of Internal Auditors
IIAM	:	Institute of Internal Auditors Malaysia
IPO	:	Initial Public Offering
ISA	:	International Standard of Auditing
KLSE	:	Kuala Lumpur Stock Exchange
LM	:	Breusch-Pagan Lagrange Multiplier
LNASSET	:	Natural Logarithm of Total Assets
LNEAFEE	:	Natural Log of Audit Fees
LNNAF	:	Natural Log of NAS Fees
MCCG	:	Malaysian Code on Corporate Governance
MIA	:	Malaysian Institute of Accountants
MSE	:	Malaysian Stock Exchange
NAF	:	Non-Audit Fees
NAS	:	Non-Audit Service
NEAC	:	National Economic Action Council
NED	:	Non-Executive Director
Non-CEO	:	Non-CEO Duality
Non-DAC	:	Non-Discretionary accruals
NYSE	:	New York Stock Exchange
OCF	:	Operating Cash Flow
OECD	:	Organisation of Economic Cooperation and Development
OLS	:	Ordinary Least Square
PCC	:	Pearson correlation coefficient
PV	:	Predictive Value
RDT	:	Resource Dependence Theory
REM	:	Random Effects Model

ROA	:	Return on Asset
RQ	:	Research Question
SCC	:	Spearman Rho correlation coefficient
SCM	:	Security Commission Malaysia
SEC	:	Securities and Exchange Commission
SFACs	:	Statement of Financial Accounting Concepts
SFAS	:	Statement of Financial Accounting Standards
SOX	:	Sarbanes–Oxley Act
TA _{it}	:	The Book Value of Total Assets of Firm <i>i</i> at the end of Year <i>t</i>
TAC _{it}	:	Total Accruals
UK	:	United Kingdom
US	:	United States
VIF	:	Variance Inflation Factor
Δ REC _{it}	:	The Change in Accounts Receivables
Δ REV _{it}	:	Sales Revenues of Firm <i>i</i> in Year <i>t</i> Less Revenues in Year <i>t</i>
ε _{it}	:	The Residual
PPE _{i,t}	:	Gross Property Plant and Equipment
PEA _{i,t+1}	:	Absolute Prediction Error of Next Year's Cash Flow after Considering Current Year's Earnings
PEB _{i,t+1}	:	Absolute Prediction Error of Next Year's Cash Flow before Considering Current Year's Earnings

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CHAPTER 1: OVERVIEW OF THE THESIS

1.1 Introduction

The importance of well-structured corporate governance in attracting long-term investments to capital markets and sustaining economic growth has become more valuable after the financial crisis and the financial reporting scandals of large corporations around the world (Al-Dhamari & Ku Ismail, 2014). Business failures have caused the participants in the capital market to lose their confidence in the ability of corporate governance to enhance the quality of financial reporting, especially earnings quality (Hashim & Devi, 2008). To make accurate investment decisions, investors need unbiased earnings information. However, due to the erosion in earnings quality, investors place less reliance on the integrity of accounting numbers (Al-Dhamari & Ku Ismail, 2014). In this regard, prior studies suggest that a sound system of corporate governance is expected to confine the opportunistic earnings management activities, and thus enhance the quality of financial reporting through increasing the reliability of reported earnings (Hashim & Devi, 2008; Muda, Maulana, Sakti Siregar, & Indra, 2018). Accordingly, corporate governance mechanisms have been strengthened and improved to ensure the quality of financial reporting (Srouji, Ab Halim, Lubis, & Hamdallah, 2016). Therefore, in recent years, the focus of attention has been moving towards corporate governance reforms and the crucial necessity for firms to improve earnings quality and revive the confidence of investors in financial reporting.

Accordingly, this thesis provides further insight into the association between corporate governance and earnings quality using a broad measure of corporate governance. It considers the interrelationship between corporate governance mechanisms based on the corporate governance mosaic suggested by Cohen, Krishnamoorthy, and Wright in 2004. This chapter provides an overview of the study. The discussion in this chapter is classified as follows: Section 1.2 presents the background of the research and identifies the research

gaps in the literature available on corporate governance and financial reporting quality. Section 1.3 discusses the problem statement. The summary of the theoretical framework is explained in Section 1.4. Section 1.5, Section 1.6, and Section 1.7 address research questions, research objectives, and hypotheses of the study, respectively. Section 1.8 illustrates the scope of the study, and Section 1.9 describes the summary of methodology. The contributions of the study will be argued in Section 1.10. Section 1.11 presents the organisation of the study. Lastly, the chapter will be summarised in Section 1.12.

1.2 Background of the Study

One of the main objectives of the financial reporting system is the provision of high-quality information regarding economic entities, which is useful to investors in investment decision-making (Van Beest, Braam, & Boelens, 2009; Al-Dhamari & Ku Ismail, 2013; Habbash, 2019). The quality of financial reporting is significant in allocating resources efficiently in capital markets. Analysts, regulators, investors, and other stakeholders rely on the financial reporting quality to invest and make decisions about the valuation of a firm and evaluation of managerial performance (Mashayekhi & Bazaz, 2010). Financial reports should be prepared with integrity and easily understood by the whole nation. They should clearly define the numbers of financial statements and give an accurate and fair view of the company's operations and financial position (Norwani, Mohamad, & Chek, 2011).

In this regard, the Financial Accounting Standard Board (FASB) issued Concepts Statement No. 8, of Conceptual Framework for Financial Reporting instead of Statement of Financial Accounting Concepts (SFACs) No. 1 and No. 2 in September 2010, about 30 years after their adoption. Since the publication of the last Concepts Statement, the Board has undertaken a project with the International Accounting Standards Board (IASB) to improve and converge their frameworks. In its Concepts Statement, the FASB

and IASB explain that quality must be defined in terms of the overall purpose of financial reporting, i.e., in providing useful information to users to make an investment, credit, and similar decisions. In the new framework, FASB (2010) states: “relevance and faithful representation are defined as two fundamental qualitative characteristics of useful information. This definition implies that if financial information is to be useful, it must be relevant and faithfully represent what it purports to represent.”

As a part of the accounting information, earnings are widely believed to be one of the most important information provided in financial statements, which should provide investors with a relevant and faithful representation of information in helping them make correct assets pricing and investment decisions (Lev, 1989; Yuan & Jiang, 2008; Liu, Yao, & Yao, 2012). Relevance and faithful representation are viewed as two significant characteristics of earnings numbers. They help investors in predicting future earnings and cash flows (FASB/IASB, 2010) (Krismiaji, Aryani, & Suhardjanto, 2016). Consequently, the earnings quality is viewed to be important to the users of financial information as well as to practitioners, regulators, and accounting researchers.

According to the agency theory, due to the separation of ownership from the management of a company, owners have insufficient information compared to managers. This information asymmetry adversely influences the ability of owners to monitor the management's behaviour effectively. There is a concern whether their interests are being adequately protected by management and whether management who has control over their assets allocates resources appropriately (Jensen & Meckling, 1976). Abbadi, Hijazi, and Al-Rahahleh (2016) opined that the information asymmetry between shareholders and managers should be considered as a concern that may lead to earnings manipulation. Since shareholders have less information than management, therefore, corporate managers can be motivated by its insider position to manage reported earnings (Lobo & Zhou, 2006; Muda et al., 2018). Manipulation of earnings decreases the earnings

reliability because it misrepresents the correct and fair reported earnings figure. Eventually, reported earnings become biased. Levitt (1998) suggests that the activity of earnings manipulation has a negative impact on the reliability and credibility of financial reporting.

To decrease informational asymmetry that may threaten the interests of the owners, owners endeavour to adapt and arrange the appropriate governance structure to control the opportunistic behaviours of managers (Zhai & Wang, 2016). Therefore, corporate governance has increasingly become one of the significant tools utilised in aligning corporate management interests with the interests of the owners (Ogeh Fiador, 2013). Indeed, corporate governance is the backbone of the preparation of high financial reporting quality. In other words, the integrity of financial reporting depends on the strength of corporate governance practices (Norwani et al., 2011). Consequently, in making an investment decision, for investors all around the world, corporate governance practices seem to be one of the most significant elements affecting their economic decision (Todorovic & Todorovic, 2012).

According to the agency theory, strong corporate governance mechanisms are expected to increase the quality of financial reports and, thus, improve the earnings quality to the users of financial information (Jensen & Meckling, 1976). However, the wave of accounting scandals among the international business community has caused the quality of financial reporting to be severely criticised (Agrawal & Chadha, 2005; Brown, Falaschetti, & Orlando, 2009). When some big companies such as “Enron” and “WorldCom” in “United States” collapsed in 2001 and 2002 respectively, the concerns among investors and regulators grew about financial reporting quality. Consequently, financial statements of companies became progressively unreliable as a source of information. Moreover, according to the literature, much recent financial reporting scandals have described that weak corporate governance practices may contribute to such

scandals due to ineffective supervision and control of the financial reporting process (Agrawal & Chadha, 2005).

Malaysian capital market has been negatively influenced by several accounting scandals such as Megan Media Holdings Bhd, Nasioncom Holdings Bhd, and Wimems Corp Bhd in recent years (Wan Ismail, 2011). That is why the quality of earnings has become more questionable in the Malaysian context. These scandals have resulted in serious concerns regarding the usefulness of financial information, especially the quality of reported earnings used by users of financial information in assessing their investment decisions (Mahmud, Ibrahim, & Pok, 2009). Additionally, the occurrence of financial reporting scandals has contributed to the loss of investors' confidence in the ability of the corporate governance mechanism to improve the quality of earnings information (Hashim & Devi, 2008; Norwani et al., 2011). This issue, in turn, highlights the need for reforming in the existent corporate governance practices to enhance the quality of earnings numbers and to revive the confidence of investors in the integrity of the financial reporting process (Cohen et al., 2004; Al-Dhamari & Ku Ismail, 2014; Habbash, 2019). Therefore, in Malaysia, stock exchanges, regulators, and standard-setters started to apply new rules and introduce the Malaysian Code of Corporate Governance in 2000 to overwhelm this problem and to enrich corporate governance quality. Consequently, corporate governance has acquired some revisions since its introduction (see Chapter 2).

Over the past two decades, as a result of the considerable discussion about the requirement and influence of corporate governance reforms (Petra, 2007), there has been a growing academic and business attention and a proliferation of studies aimed at discriminating the effect of different forms of corporate governance on the failure or success of the firm, firm performance, earnings management, financial restatement, and financial fraud. In this regard, some studies suggest that the board of directors and audit committee can monitor the management activities effectively (Abdul Rahman & Ali,

2006; Mashayekhi & Bazaz, 2010; Alkdai & Hanefah, 2012; Al-Matari, Al-Swidi, Fadzil, Fadzil, & Al-Matari, 2012; Aldamen et al., 2012; Al-Rassas & Kamardin, 2015a, 2015b). It means they are jointly able to influence the financial reporting quality. Moreover, investors have to rely on the accounting numbers reported in financial statements since they cannot observe the fair and accurate numbers of the firm's financial statements directly. In this case, external auditors would provide independent assurance on the reliability of the reported numbers as following the Generally Accepted Accounting Principles (GAAP). This statement reflects the importance of external auditing's roles in corporate governance practices (Miko & Kamardin, 2015). Equally, reforms in corporate governance have also focused on the significant tasks of internal audit function as an essential division of the governance mosaic. Increasingly, the board of directors and audit committee acknowledges external and internal auditors as their collaborators who must cooperate to secure the quality of financial reports for all stakeholders (Cohen et al., 2004).

Thus, to extend the previous studies, this study examines the effect of the interaction among four main mechanisms of corporate governance, such as the board, audit committee, external audit, and internal audit on the financial reporting quality. Specifically, this study examines the effect of board characteristics (e.g., the board size, board independence, frequency of board meeting, and Non-CEO duality), audit committee characteristics (e.g., audit committee size, audit committee independence, frequency of audit committee meeting, and audit committee expertise), external audit characteristics (e.g., auditor firm size, audit fee, and auditor independence), and internal audit characteristics (e.g., the experience of the internal audit function, and internal audit independence) on relevance (predictive value and feedback value) (PV and FV) and faithful representation of reported earnings. These two attributes (relevance and faithful

representation) are recognised as two primary qualitative characteristics of accounting information based on the FASB's/IASB's Conceptual Framework (2010).

1.3 Problem Statement

The worldwide debate on corporate governance seems endless and multi-faceted. Failure to perform appropriate corporate governance practices may decrease investors' confidence, downturns in share markets, and economic instability. In consequence, organisations and authorities worldwide endeavour to enhance the quality of corporate governance by introducing reforms in corporate governance, auditing, and financial reporting framework. These efforts are parallel with the changes in stakeholders' demands and the business environment over time. The significant challenge in this constantly changing environment is that corporate governance has an evolving nature with a cyclical pattern of reforms. Thus, it demands scholars to research new topics to deal with corporate governance challenges (Chau, 2011; Muda et al., 2018). As a result, this study still believes that research on corporate governance is worth conducting.

From the viewpoint of corporate governance research, the examination of one mechanism (for example, the board of directors) in isolation of alternate governance mechanisms (such as audit committee, external auditors and internal audit function), may not be an appropriate approach in measuring the corporate governance structure and practices of a firm. It provides an incomplete analysis in evaluating the effect of corporate governance on financial reporting quality (Jiang, Lee, & Anandarajan, 2008). Most of the studies primarily focus on examining the impact of the board of directors and audit committee on the financial reporting quality separately, and only a few studies have taken both the audit committee as well as the board of directors into consideration simultaneously (Dey, 2005; Byard, Li, & Weintrop, 2006; Bradbury Mak & Tan, 2006; Petra, 2007; Muda et al., 2018). According to the literature, apart from the board of

directors and the audit committee, other governance mechanisms play an essential role in securing the financial reporting quality (Johl, Johl, Subramaniam, & Cooper, 2013). In other words, boards and audit committees view internal and external auditors as partners who must work together to ensure that the highest quality financial reports are provided to all stakeholders. Hence, this study identifies a vital area for research, which is to examine how corporate governance mechanisms, such as the strength of the board of directors, audit committee, external auditors, and internal auditors are in the process of assuring financial statements (Cohen et al., 2004).

Previous studies have identified that specific characteristics of the board of directors (such as composition, independence, knowledge, and expertise), audit committee (such as independence, expertise, and frequency of meetings), internal auditors (such as existence, experience, and independence), and external auditors (such as audit firm size, independence, and external audit tenure) may improve the financial reporting quality (e.g., earnings quality, earnings management, restatement, and fraud) (Beasley, 1996; Klein, 2002a; Abbott, Parker, & Peters, 2004; Krishnan, 2005; Farber, 2005; Siagian, Siregar, & Rahadian, 2013; Puat Nelson & Devi, 2013; Johl et al., 2013; Cohen, Hoitash, Krishnamoorthy, & Wright, 2014; Salleh & Othman, 2016). However, little research has examined the influence of the quality of the board, audit committee, internal audit, and external audit on financial reporting quality through the measurement of the composite score. The exception to this line of research is papers by Prawitt, Smith, and Wood (2009) and Johl et al. (2013). They examined the relationship between internal audit quality and earnings management. In their study, they measured the internal audit quality by using the composite score. The use of composite score in evaluating the quality of corporate governance mechanisms (e.g., the board of directors, audit committee, internal audit, and external audit) has more advantages than the use of separate measurement of corporate governance characteristics (e.g., the board size, audit committee independence, internal

audit experience, external audit firm size, and etc.). A reason for this explanation is that the study of a characteristic of corporate governance in isolation from other corporate governance characteristics may result in misleading findings concerning the effect of corporate governance on financial reporting quality (Sivaramakrishnan & Yu, 2008). Therefore, this study tends to evaluate the influence of the overall strength or quality of corporate governance mechanisms (e.g., board quality) on financial reporting quality in addition to the examination of the impact of characteristics of corporate governance mechanisms (e.g., board size) on the quality of financial reporting.

Previous empirical studies have investigated the effectiveness of the corporate governance mechanisms in improving financial reporting quality (Al-Rassas & Kamardin, 2015a, 2015b; Miko & Kamardin, 2015; Jamaluddin, Mohd Sanusi, & Kamaluddin, 2015). Most of them have concentrated on examining the effect of a single mechanism of corporate governance on financial reporting quality, therefore leading to insufficient and misleading findings. In other words, most recent studies, which examine multiple governance mechanisms, typically assume independence among these mechanisms. However, the specific question of the linkages between different governance mechanisms has not been addressed previously. Thus, in recent years, many scholars have called for research about the interaction effects of corporate governance mechanisms on the quality of firm financial reporting (Alves, 2013). In other words, it has been necessitated to examine the influence of both single and interaction effects of corporate governance mechanisms on financial reporting quality. Cohen et al. (2004) and Rezaee (2004) indicate the existence of interrelationships between the various participants and mechanisms within the corporate governance mosaic such as the board of directors, the audit committee, the internal auditor, and the external auditor. Rezaee (2004) states that interactions among corporate governance mechanisms exist to assure

responsible corporate governance, reliable financial reporting process, adequate and effective internal control structure, and credible audit functions.

Furthermore, Gillan (2006) states that the consideration of multiple governance mechanisms and its interaction effects become more significant as governance studies develop. There has been little discussion regarding this matter. Therefore, the purpose of this study is to examine the influence of all inter-relationships between corporate governance mechanisms, as described in Cohen's corporate governance mosaic on financial reporting quality.

Prior literature has proved that some corporate governance characteristics influence financial reporting quality (Cohen et al., 2004; Rich, 2009; Norwani et al., 2011; Johl et al., 2013). However, most previous studies have identified the lack of a generally-accepted and consistent definition of high-quality financial reporting among the players in the governance mosaic (McDaniel, Martin, & Maines, 2002; Cohen et al., 2004; Moradi & Nezami, 2011; Dichev, Graham, Harvey, & Rajgopal, 2013; Mollah, Farooque, Asma, & Molyneux, 2019). Previous studies have attempted to explain that the usefulness of the financial reporting depends not only on its conformity with appropriate rules and regulations but also on a firm commitment to the essential reporting concepts of quality. These concepts can be listed as relevance, reliability, accountability, transparency, and integrity that followed by all participants of CG involved in the supply chain of reporting such as directors, management, and auditors (Rezaee, 2004; Hassan Che Haat, Abdul Rahman, & Mahenthiran, 2008; Norwani et al., 2011). Hence, operationalisation of the concept of the quality of financial reporting is still open for further investigation.

The quality of financial reporting has been evaluated by focusing on specific attributes expected to affect financial reporting, such as earnings management (Xie, Davidson, & DaDalt, 2003; Niu, 2006; Bradbury et al., 2006; Larcker, Richardson, & Tuna, 2007; Jiang et al., 2008; Rich, 2009; Mashayekhi & Bazaz, 2010; Dimitropoulos & Asteriou,

2010; Chalaki, Didar, & Riahinezhad, 2012; Abdel-Meguid, Ahmed, & Duellman, 2011; S. Ahmed, 2013; Johl et al., 2013; Mudah et al., 2018; Habbash, 2019), financial restatements (Larcker et al., 2007; Baber, Liang, & Zhu, 2012), and financial fraud (Beasley, Carcello, Hermanson, & Lapides, 2000; Goodwin & Seow, 2002). Nevertheless, none of these attributes or measurement methods enables a comprehensive assessment of financial reporting quality based on qualitative characteristics of financial accounting information defined by the IASB's/FASB's Conceptual Framework (Van Beest et al., 2009). It is believed that financial reporting information affects capital providers and other stakeholders in making an investment, credit, and similar resource allocation decisions (Sloan, 2001). In this regard, the FASB/IASB highlights the importance of high-quality financial reporting in enhancing overall market efficiency. Moreover, in making efficient investment decisions, active investors require relevance and reliable information that allows them to monitor management's actions and to participate in the firm's strategic direction as to reach in profitable investing decisions (Armstrong, Guay, & Weber, 2010).

Despite the importance of two fundamental qualitative characteristics of accounting information (relevance and faithful representation), there may be a lack of research in observing these concepts during the examination of the relationship between corporate governance characteristics and financial reporting quality. For this reason, this study will focus on two fundamental characteristics of accounting information as the specific attributes of earnings quality (see Figure 1.1).

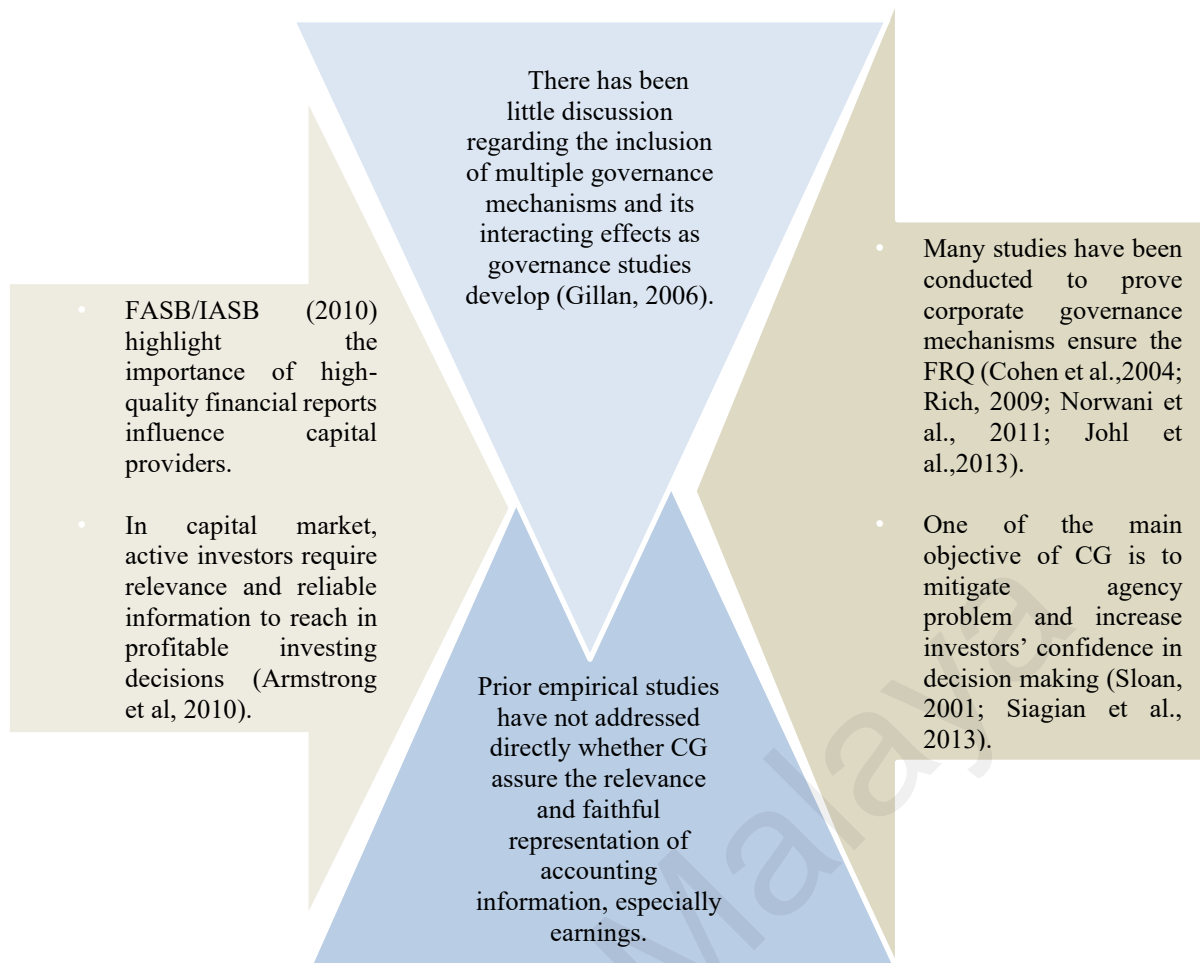


Figure 1.1: Gap in the Literature

Investors rely on earnings as one of the most significant indicators of firm performance more than any other criteria in measuring firm performance (Francis, LaFond, Olsson, & Schipper, 2004; Biddle, Hilary, & Verdi, 2009; Liu et al., 2012). Hence, earnings numbers are significantly used for investment decision-making (Schipper & Vincent, 2003). Consequently, earnings quality is presumed to be the premier to capital markets because such information contributes to the allocation of resources efficiently (Johl et al., 2013). However, prior studies have been unable so far to achieve a suitable measure of earnings, which is independent of its perspective (Jenkins, Kane, & Velury, 2006). That is, the concept of earnings quality is not a defined and proved thing that it can be easily achieved, but it is a relative concept that depends on its relationship with perceptions and attitudes (Harris, Huh, & Fairfield, 2000; An, 2009). For instance, Francis et al. (2004) define seven attributes of earnings: accrual quality, persistence, predictability, smoothness, value relevance, timeliness, and conservatism. Despite its multiple constructs, prior

research measures either one attribute (e.g., relevance) or a single component of an attribute (e.g., predictive value) of earnings quality as specified in the Conceptual Framework of the FASB and IASB. In this way, Barua (2006), Velury and Jenkins (2006), and Mehri, Umar, Malihi, and Naslmosavi (2012) state that by concentrating on one aspect of earnings quality, prior studies do not provide complete information about earnings quality in their empirical research. Therefore, the correct results about the earnings quality of a firm may not be captured. Consequently, to overcome the issues mentioned above, this study relies on the primary qualitative characteristics provided in FASB's/IASB's Conceptual Framework in addressing multiple dimensions of earnings quality. Accordingly, FASB/IASB (2010) states that if the information is to be useful, it must have both fundamental characteristics such as relevance and faithful representation.

Recent research has demonstrated that the association between corporate governance and the quality of financial information has been strongly argued in the developed countries. However, the questions still remain as to how relevant such empirical evidence from the developed countries is to emerging economies when there are institutional differences between those countries (e.g., financial, legal, political, economic, and cultural differences) (Yatim, Kent, & Clarkson, 2006). Thus, the need for a study that identifies good governance practices, as well as its association with financial reporting quality has gained a necessity in emerging economies such as Malaysia (Ali et al., 2008). There are some reasons to show that the market of Malaysia provides a different domestic environment. First, Malaysia is significantly different from the developed countries in terms of economic development and capital market maturity (Johl et al., 2013). Second, institutional differences exist between developing capital markets such as Malaysia and other developed markets. These institutional differences comprise a weak market for corporate control (Lins, 2003; Gibson, 2003), more concentrated stock ownership (Shleifer & Vishny, 1997; Claessens, Djankov, & Lang, 2000), and significant

government ownership in listed companies (Shleifer & Vishny, 1997; Claessens et al., 2000; Lemmon & Lins, 2001; Mak & Li, 2001). At the firm level, these institutional differences may affect how boards of directors and managers govern their firms (Haniffa & Hudaib, 2006; Yatim et al., 2006). Further, family members are the owner of many Malaysian corporates who engages themselves in managing the firms and selecting board members (Claessens, Djankov, Fan, & Lang, 2002; Cheung & Chan, 2004). It will probably threaten the real independence of a board of directors. Third, the legal protection for minority shareholders is argued to be relatively weak in the country (La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 2000). Fourth, even though the demand for accounting information quality has increased in the last two decades, the earnings quality in Malaysia has not experienced much improvement. Investors still have doubts about the quality of earnings reported by Malaysian companies (Ball, Robin, & Wu, 2003; Al-Dhamari & Ku Ismail, 2013, 2014). Fifth, Malaysia has had three reforms (2007, 2012, and 2016) during the recent decade to increase foreign investors' confidence. This country has secured the 4th position among the world's top countries in attracting investors (Alnasser, 2012). Thus, Malaysia, as an emerging market, is taken into consideration by this study.

Based on the above discussion, firstly, this study aims to provide further evidence on the interaction effect of four main corporate governance mechanisms (such as the board of directors, audit committee, internal audit, and external audit) on earnings quality; rather than considering only one or two mechanisms of corporate governance in the relationship with earnings quality. Secondly, this study examines earnings quality based on fundamental qualitative characteristics of accounting information, namely relevance and faithful representation. Financial information is relevant if it has predictive value, confirmatory value, or both (FASB/IASB, 2010). Therefore, this study uses predictive value and confirmatory value (feedback value) of earnings as two attributes of relevance. To be useful, financial information not only must be relevant, but it also must be faithfully

represented. To be a perfectly faithful representation, the information would be complete, neutral, and free from error (FASB/IASB, 2010). Hence, this study uses neutrality as a component of faithful representation.

1.4 Theoretical Framework

This study employs the agency theory and the resource dependence theory as the main theories to examine the association between corporate governance and financial reporting quality. The agency theory has a concern about protecting the shareholders' interests by mitigating the agency problem, which results in the high quality of accounting information, particularly earnings. Nicholson and Kiel (2007) show that high monitoring does not solely secure corporate performance, even though previous research confirmed that monitoring the role of some corporate governance characteristics contributes towards the integrity of financial reporting (see Chapter 2). Therefore, the resource dependence theory (RDT) is described as the second theory, which should be taken into consideration in corporate governance research. The basic concept of this theory is that corporations attempt to exert control over their environment by adopting the resources required to survive (Nicholson & Kiel, 2007). The agency theory and the resource dependence theory provide theoretical justification for the link between corporate governance and financial reporting quality. Based on these theories, research hypotheses are tested to investigate the influence of corporate governance mechanisms on earnings quality. Further details are provided in Chapter 2.

1.5 Research Questions

This study posits the following research questions:

1. Do corporate governance mechanisms and their characteristics influence the quality of earnings?
2. Do the interactions between corporate governance mechanisms influence the quality of earnings?

1.6 Research Objective

The main objectives of this study are:

- 1- To examine the association between the characteristics of corporate governance mechanisms (board of directors, audit committee, internal audit, and external audit) and the quality of earnings.
- 2- To examine whether the interactions between corporate governance mechanisms affect the quality of earnings.

1.7 Research Hypotheses

This study captures the above- mentioned theories and research questions to develop the following main hypotheses and sub-hypotheses:

H1: There is a relationship between board characteristics and earnings quality:

H1a: There is a relationship between board size and earnings quality.

H1b: There is a relationship between board independence and earnings quality.

H1c: There is a relationship between non-CEO duality and earnings quality.

H1d: There is a relationship between the frequency of board meetings and earnings quality.

H1e: There is a relationship between board quality and earnings quality.

H2: There is a relationship between audit committee characteristics and earnings quality:

H2a: There is a relationship between audit committee size and earnings quality.

H2b: There is a relationship between audit committee independence and earnings quality.

H2c: There is a relationship between the frequency of audit committee meetings and earnings quality.

H2d: There is a relationship between audit committee financial expertise and earnings quality.

H2e: There is a relationship between audit committee quality and earnings quality.

H3: There is a relationship between internal audit characteristics and earnings quality:

H3a: There is a relationship between internal audit experience and earnings quality.

H3b: There is a relationship between internal audit independence and earnings quality.

H3c: There is a relationship between internal audit quality and earnings quality.

H4: There is a relationship between external audit characteristics and earnings quality:

H4a: There is a relationship between external audit size and earnings quality.

H4b: There is a relationship between external audit fees and earnings quality.

H4c: There is a relationship between external audit independence and earnings quality.

H4d: There is a relationship between external audit quality and earnings quality.

H5: The interaction between board quality and audit committee quality has an influence on earnings quality.

H6: The interaction between board quality and external audit quality has an influence on earnings quality.

H7: The interaction between board quality and internal audit quality has an influence on earnings quality.

H8: The interaction between audit committee quality and external audit quality has an influence on earnings quality.

H9: The interaction between internal audit quality and external audit quality has an influence on earnings quality.

H10: The interaction between board quality and internal audit quality has an influence on earnings quality.

1.8 Scope of the Study

The scope of this research is limited to investigate the relationship between four main corporate governance mechanisms described in Cohen's Mosaic (2004) and the primary qualitative characteristics of earnings. The study does not include other aspects of corporate governance mechanisms such as ownership structures, governing bodies, legal counsels, and financial advisors who play respectively external monitoring, compliance, and advisory roles in financial reporting quality (Rezaee, 2004). Moreover, the managerial role of management has not been considered in this research. This study explores the function of corporate governance mechanisms such as the board of directors, audit committees, internal auditors, and external auditors who respectively oversight, audit, and assure the providing function of financial reporting by management (Rezaee, 2004). This study uses only earnings as a proxy for accounting information while ignoring other accounting information included in financial statements. It, thus, may be indicated as one of the limitations of this study.

Malaysian companies are within the scope of this study. However, this research excludes the non-financial firms of Bursa Malaysia since the requirements and disclosures of financial reporting in these firms considerably differ from the firms belonging to other industries (Johl et al., 2013). The period of study should cover two dates of MCCG's revision, respectively, in 2007 and 2012 based on the availability of the data. Therefore, since the effective date of these two regulations is respectively in 2008 and 2012, this study considers three different periods. The first period is the year 2007 when companies did not follow the MCCG 2007. The second period includes the years of 2008, 2009, 2010, and 2011 when firms showed compliance with MCCG 2007. The third period consists of the years of 2012 and 2013 when the effective date for compliance with MCCG 2012 for listed companies was the year 2012.

1.9 Research Method

This study formulates ten main hypotheses, including 23 subsidiary hypotheses, and constructs a few models to test these hypotheses to explore the influence of corporate governance characteristics on earnings quality. These models were examined, by generalised least square (GLS) in panel data, applying a sample consisting of all listed companies on the Malaysian Stock Exchange (MSE), with the exclusion of financial and insurance firms. Earnings quality is categorised by two primary qualitative characteristics defined by FASB/IASB (2010), such as relevance and faithful representation. Relevance is measured by two components, namely predictive value and confirmatory value (feedback value). Moreover, predictive value and confirmatory value are measured by two different models, which will be elaborated comprehensively in Chapter 4. Representational faithfulness is also measured by a component named neutrality. The magnitude of abnormal accruals, as evaluated by the Modified Jones Model (Dechow, Sloan, & Sweeney, 1995), is used as a proxy to measure neutrality. The corporate governance mechanisms were classified into four constructs: 1) Board Characteristics; 2) Audit committee Characteristics; 3) internal audit characteristics; 4) external audit characteristics.

1.10 Contribution of the Study

This study extends the corporate governance literature by simultaneously examining the effects of more corporate governance mechanisms and their characteristics (rather than one mechanism or one characteristic) on earnings quality. This study mainly enriches the literature by analysing the interaction between corporate governance mechanisms (board of directors, audit committee, external audit, and internal audit) and its influence on earnings quality. Even though there is an interrelationship between corporate governance mechanisms, these interactions have rarely been examined before. Further, this research operationalises different measures of financial reporting quality (earnings

quality) based on primary qualitative characteristics of accounting information defined by FASB's Conceptual Framework (2010). The selection of relevance and faithful representation as two parameters to explain the quality of earnings is justifiable since these proxies reflect the quality of accounting information based on the international accounting standard (FASB/IASB, 2010).

The study attempts to pursue the well-known concepts in agency theory and resource dependence theory. Compounding two theories elaborates on the monitoring functions by the board and audit committee, the assuring functions by external auditors, the auditing functions by internal auditors, and, eventually, the effectiveness of those functions on financial reporting quality.

Specifically, one of the most significant contributions of this study is utilising the substitution or complementary theory to develop hypotheses regarding the interaction between corporate governance mechanisms. The complementary or joint effect exists between two mechanisms of corporate governance when the interaction between those mechanisms in corporate governance mosaic improves financial reporting quality. The complementary effect may have arisen even if one of those mechanisms does not significantly enhance financial reporting quality. In comparison, substitution relationship between two mechanisms exists when two mechanisms of corporate governance are positively associated with the financial reporting quality while the interaction between these two mechanisms is not related or negatively related to the financial reporting quality. These results suggest the probability that these two corporate governance mechanisms can be substituted for one another to sustain the level of financial reporting quality (Johl et al., 2013).

This study has also investigated the impact of corporate governance on the relevance and faithful representation of financial accounting information, which make accounting information useful for decision-making. Therefore, findings may contribute in

formulating the necessary policies to ensure the quality of accounting information based on FASB's conceptual framework. It means if accounting information has predictive value and feedback value and also is represented faithfully, it can be improved and relied upon as an accurate reflection of future value to make a useful decision. It will eventually aid the efficient allocation of economic resources.

Furthermore, regulators may find a strong association between specific characteristics of corporate governance and the qualitative characteristics of accounting information. By identifying the categories representing appropriate governance better linked to financial reporting, the findings of this study are significant to those practitioners and regulators seeking such links. It can assist them when they set new standards or codes to empower the corporate governance mechanism, mainly in a relationship with financial reporting quality. Therefore, the findings of this study are essential to those who contend that strong corporate governance is vital for boosting investor confidence and market liquidity.

Moreover, this study addresses the characteristics representing strong or weak governance that is associated respectively with high or low-quality accounting information. These findings may motivate standard-setters, regulators, academics, users of accounting information, and other stakeholders (which intend to relate strong or weak governance to accounting information quality) to reconsider whether these characteristics reflect the opposed concept or definition. It is hoped that this research would shed some light on existing ambiguities.

From the corporate governance characteristics perspective, examining multi-factors of corporate governance mechanisms and interaction between them may be an appropriate approach to measuring the corporate governance structure of a firm and provides a complete analysis of the influence of corporate governance on financial reporting quality. The interpretation of the results of this study may lead to a better understanding of both corporate governance and financial reporting quality. Moreover, it assists companies in

understanding the function of corporate governance characteristics within companies. It may also help the organisation in designing their corporate governance structure by utilising appropriate characteristics that provide investors with more reliable and high-quality financial information.

Additionally, the interactions among all key participants in the corporate governance mosaic are essential for the effectiveness of governance and to access financial reporting with high quality. The result of this study can help regulators and practitioners to understand the importance of a specific characteristic of corporate governance as well as joint effect and substitution effect among direct players in the corporate governance mosaic.

Finally, the result of this study is expected to add value to those who invest in the Malaysian Stock Exchange by acquiring accurate information regarding the listed companies, which in turn, may help in obtaining relevance and faithful representation of accounting information in making rational economic decisions.

1.11 Organisation of the Study

This thesis is divided into six chapters:

Chapter 1: Introduction. This chapter introduces the research topic, background of the study, problem statement, research questions, research objectives, research hypotheses, and the contributions of the study. Each of the subsequent chapters is organised as follows.

Chapter 2: Background and Literature Review. This chapter provides information related to the framework and prior research on corporate governance. Then, this chapter provides a review of financial reporting quality and qualitative characteristics of earnings according to the FASB/IASB's Conceptual Framework

Chapter 3: Theoretical Framework and Development of the Hypotheses. This chapter reviews the relationship between corporate governance characteristics and financial

reporting quality. It further discusses the theoretical framework underpinning the current study. Finally, all main hypotheses are developed in line with the stated research objectives.

Chapter 4: Research Method. The chapter discusses the research paradigm, research frameworks, models specifications, the measurement and definition of variables. Then, the sample selection criteria and data collection method are presented. The process of secondary data analysis is also discussed in this chapter.

Chapter 5: Analyses, Discussion, and Results. This chapter discusses the data analysis and interpretation of the results. The findings of the study are summarised and discussed.

Chapter 6: Summary and Conclusion. This chapter articulates the implications of the findings and highlights the significance, contributions to theory, practice, and methodology. It is eventually followed by the discussion of research limitations and suggestions for future study.

1.12 Summary of the Chapter

This chapter has introduced the thesis by outlining the topic of this research, introduction, and background of the study, the problem of the study, the theoretical fundamental of the study, the research questions and objectives, research hypotheses, the scope of the study, contributions of the study pursued, and the thesis structure. The next chapter provides an overview of corporate governance and financial reporting quality, particularly earnings quality.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter is divided into six sections. The first section prepares the definitions of corporate governance (CG). The second section discusses the history of corporate in the world and Malaysia. In the third section, the review discusses the CG structure and different functions defined by Rezaee (2004). By the following of this section, most corporate governance mechanisms and characteristics are described by reviewing prior literature, as well as based on Bursa Malaysia Listing Requirement. The fourth section illustrates the interaction between CG mechanisms. In the fifth section, this study introduces financial reporting quality (FRQ), particularly earnings quality based on primary qualitative characteristics of accounting information described by the Financial Accounting Standards Board (FASB)/ International Accounting Standards Board (IASB) (2010). In the final section, the review summarises the discussions in this chapter.

2.2 Corporate Governance

2.2.1 The Concept of Corporate Governance

Many studies have been conducted to investigate the significance of CG in assuring the effectiveness of monitoring. However, there is no accepted definition for CG addressed by existing research (e.g., Solomon, 2007). It seems that Adam Smith (1950) was the first one providing fundamental insight into CG. In his work entitled *Wealth of Nations* (1776), he stated that:

“When you manage the money of other people, not your own money, it is not possible to expect that you show the same attentiveness that you may have for your own money. Similar to the guardians of the rich people, they pay attention to the small points that are not considered by the rich masters, and easily award themselves for it.”

Furthermore, according to Berle and Means (1932), who studied the separation of ownership from control, the objective of managers cannot completely go along with those of owners because of managerial self-interest and information asymmetries in the

corporation. CG mechanism enables companies to protect shareholders against the executives' self-interest and ensures the arrangement of managers' interest with shareholders' benefit.

Jensen and Meckling (1976) highlight that managers (the agent) act on behalf of the shareholders (the principal), who are the real owners of the company. However, according to agency theory, due to the separation of ownership from management, managers might be motivated to make fraud against owners to increase their wealth (Abdul Rahman and Ali, 2006). Thus, in the absence of effective monitoring procedures within a company, managers are more likely to take actions that deviate from the benefit of shareholders, such as managing earnings, which leads to increased agency costs. Based on agency theory, Fama and Jensen (1983b) propose that a system that can separate decision management from decision control is needed to limit agency costs. Core, Holthausen, and Larcker (1999) suggest there are more significant agency issues in listed US firms with weaker governance mechanisms. Therefore, corporate governance mechanisms can address beneficial procedures that may restrict the managers' power to disregard the benefit of shareholders. Consequently, agency costs are decreased. In this regard, Fama (1980), Fama and Jensen (1983a), and Williamson (1988) believe that CG mechanisms limit managerial opportunism.

Over the last two decades, the function of different corporate governance characteristics has been taken into more consideration as monitoring systems. Those consist of mechanisms such as independent board and sub-committees that prepare more assurance, especially for investors and regulators, and secure the shareholders. Some regulations were established as reforms to promote the function of CG, mostly associated with disclosure. For example, the Sarbanes–Oxley Act (SOX) (2002) was one of the reforms of the disclosure of CG information, which was offered following accounting scandals of some firms such as Enron, Tyco International, Adelphia, Peregrine Systems,

and WorldCom. According to Chang and Sun (2009), SOX has had a significant influence on the CG mechanism. They highlight a negative association between earnings management and board and audit committee independence after SOX, which was not seen in the pre-SOX period.

One of the most popular and implicit definitions of corporate governance is that introduced by Adrian Cadbury, who was a pioneer in raising awareness and presenting the debate on corporate governance reforms. According to the Cadbury Report (1992, para 2.5), CG is a mechanism or system which directs and controls companies. The report states that shareholders appoint the board of directors and auditors to ensure the appropriateness of governance. The board is thus responsible for supervising the management of the business and reporting to shareholders on their supervision. The directors' function is associated with how the firm is governed, while the auditors' main role is to provide an independent check on financial statements to shareholders (Cadbury, 1992).

Shleifer and Vishny (1997) claim that CG proposes the methods by which shareholders and stakeholders are assured about obtaining their investment's return. The CG mechanism should ease the arrangement of benefits among managers, directors, and investors. By strong CG, management is responsible to the board of directors, and the board of directors is accountable to the shareholders to enhance shareholder's interests.

Similarly, John and Senbet (1998) believe that the set of mechanisms are included comprehensively by CG that lead to the protection of the interests of shareholders. Then, CG can enable shareholders to control the insiders and management of corporate. Labelle, Gargouri, and Francoeur (2010) state that CG is the set of regulations that are used to enhance the financial statements' reliability and validity in securing the investors' protection.

From a systemic perspective, the Organisation for Economic Cooperation & Development (OECD) (2004) indicated the objectives, instruments, and transmission mechanisms of CG, which has become a useful and widely acceptable definition:

“CG involves a set of relationships between a company’s management, its board, its shareholders, and another stakeholder. CG also provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined. Good CG should provide proper incentives for the board and management to pursue objectives that are in the interests of the company and its shareholders and should facilitate effective monitoring.”

Moreover, based on the agency perspective, a narrower definition is provided by Mitton (2002). He defines CG as the means by which minority shareholders are protected from expropriation by controlling shareholders or managers. Bozec and Bozec (2007) believe that CG controls and governs the behaviour of managers, specifies their discretionary powers, and tries to counteract potential losses are caused by the difference of benefits between managers and shareholders.

In other words, Solomon (2007) considers stakeholder concerns in the definition of corporate governance. He highlights that CG includes an internal and external system of checking and controlling entities. CG ensures that companies discharge their accountability to all their stakeholders and act in a socially responsible way in all areas of their business activity.

Since the authors view CG from different perspectives and through various theoretical frameworks, different definitions of CG exist. For instance, Cadbury (1992), Shleifer and Vishny (1997) outline the definitions of CG based on agency theory and believe that CG is related to ownership and control and assist in maximising the wealth of shareholders. On the other hand, the definition of Solomon (2007) is based on stakeholder theory, which believes that not only maximising of the wealth of shareholders is significant to the firms but also the issues related to the social and environment are the critical concern to the firms.

Although the meaning of CG in the literature changes, it is basically concerned with both the internal controls and board structure and external aspects, including the association with shareholders and stakeholders (Abdul Rahman & Ali, 2006).

The Malaysian Code of Corporate Governance (MCCG, 2012), consistent with the Blueprint, retains the definition of CG as set out in the High-Level Finance Committee Report 1999. Corporate governance is defined as the procedure and structure utilised to direct and govern the business and activities of the organisation to improve corporate accountability and business success. The ultimate objective of CG is realizing long-term shareholder value while taking into account the interests of other stakeholders.

2.2.2 The History of Corporate Governance in the World and Malaysia

The last two decades have witnessed a number of major governance failures of companies and severe responses by standard-setters and regulators to prevent such failures from recurring. Perhaps Enron is the most well-known case of such failures where a weak planned strategy of business along with a poor monitoring system caused one of the biggest bankruptcies in the US's history (Healy & Palepu 2003; McLean & Elkin 2004). The SOX was approved in 2002 in response to the accounting scandals that occurred at Enron, WorldCom, and some other large companies in the US. It consists of broad measures dealing with the oversight of the accounting profession, financial reporting, corporate governance, and some conditions influencing the business environment (Romano, 2005).

When CG drew world attention in 2002, in addition to the US, some countries in the world accepted the best guidelines. For example, the United Kingdom, Canada, France, Spain, South Africa, New Zealand, and Germany produced Cadbury Report, Dey Report, Vienot Report, Olivencia Report, King's Report, Principles and Guidelines on CG, and Cromme Code respectively. The purpose of most of these rules and regulations was to

enhance environments of the firm's CG and emphasis on the financial measures of CG (Bhagat & Bolton, 2009; Norwani et al., 2011). Requiring independent directors, more independence of the audit committee and more accountable chief executive officer (CEO) and chief financial officer (CFO) were all conditions the CG emphasis on (Cong & Freedman, 2011).

Many reforms have been made to consolidate CG practices. Reforms revive the confidence of investors in the integrity of the financial reporting process not only at the level of the US (SOX Act of 2002 in the USA) but also at an international level (OECD, 2004) and supranational level (European Commission, 2003). There are some beliefs that companies expect well-structured CG mechanisms and regulatory modifications by CG reforms and enrichment of CG quality. By strong CG, they monitor management effectively in the financial reporting process. Then these companies can provide reliable and confident accounting information. (Cohen et al., 2004; Byard, 2006).

Allen (2005) and Wan Ismai (2011) argue that corporate governance in emerging markets has lately attracted much attention due to the weaknesses of corporate governance in developing countries, which was an important reason for a series of economic crises that affected these countries. It seems that the emerging markets tend to have well-developed physical financial infrastructures such as the central banks, commercial banks, and stock exchanges. However, the accounting, governance, and regulation systems, as well as other financial infrastructure are not well-developed in these countries. Compared to the world's more advanced systems, emerging markets may have less efficient markets with less liquidity. Higher uncertainty and risk result from such discrepancies lead to a higher possibility of international diversity for shareholders all around the world (Kearney, 2012).

CG has also become a critical issue in Malaysia since the emergence of the Asian financial crisis in mid-1997. The 1997 Asian financial crisis and high-profile corporate

scandals in Malaysia have been linked to or at least exacerbated by weak corporate governance (Abdul Rahman & Ali, 2006; Morris, Pham, & Gray, 2011). Morris et al. (2011) state that the crisis was a massive and unexpected macroeconomic shock that pushed firms' market values out of balance. This crisis created unforeseen uncertainty about firms' values and the anticipated level of wealth expropriation by insiders arising from the Malaysian firm's pyramid share ownership structures. Subsequently, the demand for transparency of financial reporting and regulatory reforms increased by the investors, and CG was addressed after the crisis.

After the crisis, to assure appropriate management of companies' resources and effective protection of investors' wealth, the importance of monitoring and control mechanisms have been taken into consideration. This crisis has also taught corporate in Malaysia that enhanced standards of CG can raise the confidence of investors and increase capital inflow into the country. Due to this crisis, to strengthen the CG system of Malaysian corporations, the government of Malaysia requested the emergency development of the National Economic Action Council (NEAC) to make the country able to deal with the crisis. Before 1999, Malaysia was without a specific framework of CG or Code of Best Practice for the business community to follow. However, by March 1999, the Finance Committee of CG developed a Code of Best Practice, which is a similar procedure to that observed in the Hampel report (1998). By the year 2000, the Kuala Lumpur Stock Exchange's (KLSE) listed companies had to present in the annual report how they have implemented the CG code and principles and to the extent to which the firms have followed the perfect activities (Mohamad, 2002).

The MCCG 2000 as the first issuance highlighted a significant milestone in CG reform in Malaysia. It codified the rules and best practices of strong governance and defined excellent CG structures and internal processes. Then, the World Bank assessed the CG of Malaysia in 2005 and indicated that major CG reforms had been implemented since 1998.

However, the country is still facing some challenges relating to the protection of minority interests and the accountability of directors.

Consequently, to realise the developments of a domestic and international market, Malaysia revised MCCG 2000 in 2007, and all listed firms in Bursa Malaysia had to follow the new code. In 2007, the code was revised (code 2007) due to the rising trend in corporate irregularities (post-Asian crisis) such as Transmile Group Bhd, Takaful Bhd, Southern Bank Bhd, Megan Media Holdings and Nasion Com Holdings (Johl et al., 2013). Key amendments to the Code are aimed at strengthening the board of directors and audit committees, and ensuring that the board of directors and audit committees discharge their roles and responsibilities effectively. These regulatory reforms presume that CG structures through corporate board and audit committees influence the financial disclosure quality (Ahmad-Zaluki & Wan-Hussin, 2010; Al-Maghzom, Hussainey, & Aly, 2016). The code also recommended the establishment of an internal audit function (IAF). Then, to achieve the independent IAF, the code prescribed that the head of internal audit should be responsible for reporting directly to the audit committee. Moreover, the code proposed the establishment of an audit committee composed exclusively of non-executive directors. Besides, it was also advised that all members of the audit committee should be able to read, analyse, and interpret financial statements for the effective discharge of their responsibilities (MCCG, 2007).

The Malaysian economy was severely affected by the global financial crises in 2007-2008, like other countries. It resulted in a 670 points reduction in the Bursa Malaysia index, which was 45 percent of its total value. After the Asian Financial Crisis 1997, it was the highest decline in the country (Angabini & Wasiuzzaman, 2011). Afterwards, the Asian Round Table on CG recommended to improve governance structure and overcome the weaknesses exposed by the crisis in Asian countries such as Malaysia (OECD, 2011).

The CG Blueprint was issued in 2011 by the Securities Commission Malaysia, which outlines the strategic initiatives. The purpose of these initiatives was to enhance the self and market discipline to improve the national governance structure. Ultimately, it paved the way for introducing the new code in March 2012 (MCCG, 2012). That is, the MCCG was revised for the second time in 2012 that is a critical output of the Blueprint. The MCCG 2012 replaced the 2007 Code. The emphasis of the MCCG 2012 is enhancing the structure of board and composition, recognising of the director's role, specifying the broad principles, and providing the recommendations on the structures and processes. These recommendations help the companies make strong CG as an integral part of their business behaviour and culture (Rahman, Ibrahim, & Ahmad, 2015).

Similarly, the MCCG 2012 encourages the standards' adoption beyond the minimum ones that are recommended by the regulation. The observance of the MCCG 2012 by companies is voluntary. However, listed companies are required to report on their compliance with the MCCG 2012 in their annual reports (Johl et al., 2013). MCCG 2012 describes some characteristics of the board of directors, audit committee, internal audit, and external audit. It thus indicates the significance of the presence of an effective CG. Definition of these terms would be provided in the next sections. In 2017, the MCCG, which supersedes its earlier edition, adopts a new approach for encouraging higher internalisation of corporate governance culture. The MCCG 2017 is based on three fundamental principles of good corporate governance, which are the board's leadership and effectiveness, effective audit and risk management, and integrity in corporate reporting and meaningful relationships with stakeholders. Figure 2.1 shows a summary of the history of CG in Malaysia.

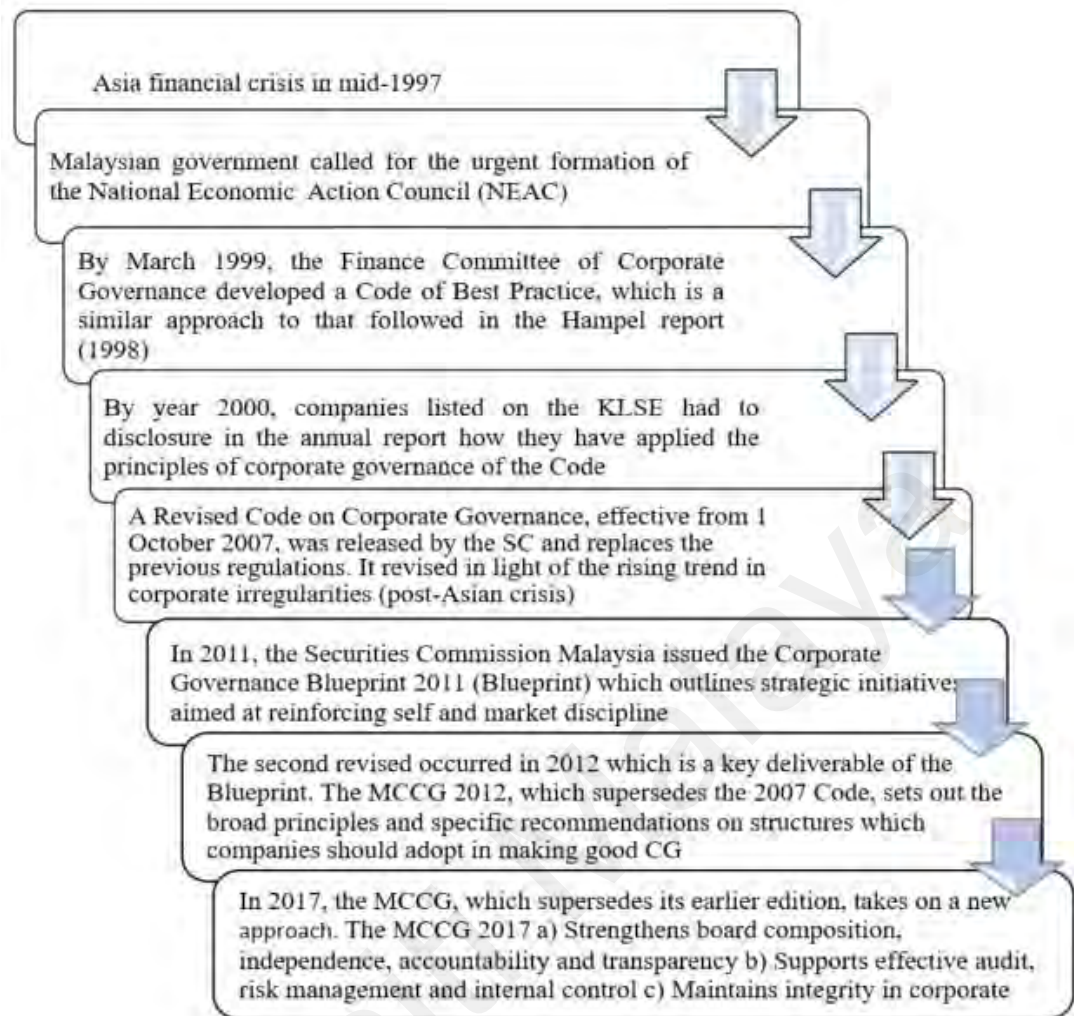


Figure 2.1: Summary of the CG Regulations in Malaysia

2.2.3 Corporate Governance Structure

The separation of ownership and control creates potential conflicts of interest between shareholders and the manager. Corporate governance structure acts as a mechanism available to protect shareholders from the self-interest of executives and assures alignment of the interests of managers with those of shareholders (Berle & Means, 1932; Hart, 1995).

Corporate control mechanisms are the means by which managers are disciplined to act in the investors' interest. According to the classification of the researchers, there are two types of mechanisms: the internal mechanisms and external mechanisms. The internal mechanisms (the roles of the board of directors and management) include managerial

incentive plans, director monitoring, and the internal labour market. The external mechanisms (the market-based monitoring and the legal/regulatory system) include the outside shareholder or debtholder monitoring, competition in the product market, the market for corporate control, the external managerial labour market, and securities regulations. These mechanisms protect the outside shareholders against dispossession by the corporate insiders (Bushman & Smith, 2001).

Regarding this matter, Cohen et al. (2004) have provided a general framework for understanding CG mosaic and its influence on FRQ. The original CG mosaic includes four cornerstones of corporate governance (i.e., the board of directors, audit committee, internal auditors, and external auditors) and their interaction. However, Cohen et al. (2004) have missed elaborating on the interaction between internal auditors and the board of directors. According to Johl et al. (2013) who studied the interaction between internal auditors and the board of directors, this study also considers this aspect of interaction to extend and modify corporate governance's mosaic defined by Cohen et al., (2004). (Figure 2.2).

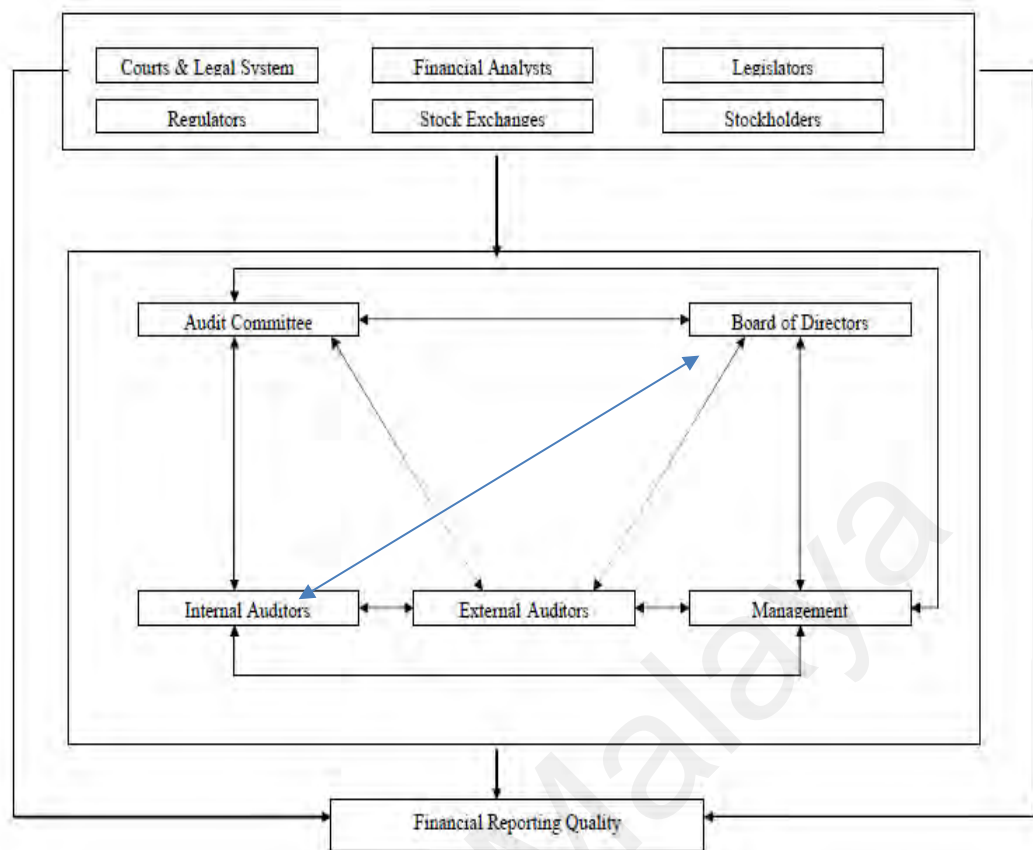


Figure 2.2: Modified Cohen's CG Mosaic

Corporate governance structure consists of both internal and external mechanisms for managing and monitoring corporate activities to increase shareholder value (Rezaee, 2004). Nevertheless, the advocates of agency theory proposed that in the case of the failure of the internal control mechanisms, more expensive, external control mechanisms (e.g., acquisitions, divestitures, and ownership amendments) will emerge to control self-serving managers (Walsh & Seward, 1990). Internal mechanisms are usually the more preferred mechanisms because the external mechanisms are more costly to the principal's utility (Walsh & Seward, 1990). The mechanisms, such as the board of directors, audit committee, and internal auditing, are included in the internal CG (Keenan, 2004).

According to Rezaee (2004), corporate governance is viewed as interactions among participants in the oversight function (the board of directors and audit committee), the managerial function (management), the audit function (internal auditors), the assurance

function (external auditors), the compliance function (the SEC, standard setters, regulators, organised stock exchanges), the advisory function (legal counsels, financial advisors), and the monitoring function (investors, creditors, financial analysts, and other stakeholders) in the governance system of corporations.

Therefore, concerning the research objectives of this study, the oversight function (the board of directors and audit committee), the audit function (internal auditors), the assurance function (external auditors) are taken into consideration.

2.2.3.1 Oversight Function: Board of Directors

The board of directors has a significant role in the CG, and they have the responsibility to monitor and advise executives on behalf of investors. It secures that managers work in line with the interests of the investors, and the management decisions are assigned to the managers. The board of directors retains ultimate control by approving and monitoring crucial managerial decisions (Fama & Jensen, 1983a). That is, the board of directors serves as an important role in helping alleviate agency conflicts. Through the board of directors, the shareholders can influence the management behaviour, supervise and monitor the discretionary behaviour of top executives, authorise critical decisions, and make the company's interests align with shareholders' value (Fama, 1980; Hart, 1995; Gillan, 2006).

Due to the separation of ownership and control in the organisations, the agency cost increases. In this regard, Fama and Jensen (1983b) propose that the board of directors acts to minimise this cost. The board of directors receives authority over the internal control of the firm from shareholders. They have responsibility for the management's monitoring to reduce their opportunism and then to ensure that executives do not act against shareholders' interests. They are also responsible for enhancing the wealth of shareholders.

Rezaee (2002) summarised the board of directors' role as follows: it is a mechanism of (1) supervising the decisions, plans, and business behaviour of the management; (2) protecting the invested capital; (3) inhibiting the possession of the power by the top executives, and (4) developing a system of checking and balancing. Finally, it should be claimed that the success of the board in fulfilling its oversight responsibility depends on the structure, resources, and authority of the entire board as well as its working relationships with other participants of corporate governance (including management, external auditors, internal auditors, legal counsel, professional advisors, regulators, and standard-setting bodies) (Rezaee, 2004).

(a) Board characteristics based on Listing Requirements of Bursa Malaysia

Accordingly, MCCG 2012 concentrates on the enhancement of the board composition and structure. It also recognises the directors' role as responsible and active fiduciaries.

The minimum size for the directors on board in Malaysia is specified as three. However, an applicant director or a listed issuer is not allowed to have over 25 directorships in the companies: (a) the number of the directorships in listed issuers must not exceed 10, and (b) the number of directorships in the organisations other than listed issuers must not be over 15. The optimal size of the board for the companies is not advocated by the MCCG 2012. Nevertheless, it emphasises that the board should investigate its size, specifying the size's impact on its effectiveness.

Bursa Malaysia Corporate Governance Guide 2012 states that a listed issuer is obliged to guarantee that at least two directors or one-third of the board of directors of a listed issuer, whichever is the higher, are independent. According to MCCG 2012, the different individuals should occupy the chairman and CEO positions to ensure proper checks and balances on the top management. The chairman must be a non-executive member of the board, and the board must comprise a majority of independent directors where the

chairman of the board is not an independent director. The other suggestion by the MCCG (2012) is regular board meetings for discussing the corporation's issues and activities. Information on meetings such as a number of meetings and details of attendance should be disclosed in the annual report.

Hence, as stated by the Bursa Malaysia CG Guide 2012, investigation of the determining factor of the board's characteristics has been taken into consideration in evaluating the effectiveness or quality of the board. It seems some board attributes can influence the quality of their monitoring responsibility. These attributes include as follows: board size, board independence, the frequency of board meetings, and non-CEO duality. Board size is the number of directors on the board. Board independence refers to the proportion of the independent directors on the board. The Non-CEO duality is whether the CEO is not the chairperson of the board. Finally, the board's frequency of meeting means the number of the meeting is held by the board's member in a year.

(b) Board Size

The total proportion of the directors present in the board is defined as the size. It is held that the size of the board is a necessary factor of effective decision-making and an important factor in determining CG effectiveness (Pearce & Zahra, 1992; Jensen, 1993).

There could be a small and large size of the board of directors based on its number. According to the researchers, the boards with a larger size have problems in the establishment of personal and trust relationships, and they have difficulty in preserving the cohesion and strong norms. In other words, smaller boards make coordination, communication, and decision-making much easier than larger boards. Therefore, a large board has less efficient monitoring, less participation, is less organised and is less able to reach an agreement compared with a small board. Moreover, it is stated that using the knowledge and competence of all the board members effectively is difficult in the

companies having larger boards (Yermack, 1996; Eisenberg, Sundgren, & Wells., 1998; Florackis, 2008; and Alkdai & Hanefah, 2012). According to Lipton and Lorsch (1992), if the number of directors is more than seven members, they are less effective because of the process problem. Also, Raheja (2005) believes that due to the free-riding issues, the larger board size leads to a less effective monitoring role.

Contrary to the previous point of view, some researchers believe that larger boards are more influential since they have more ability to protect shareholders' interests (Dutordoir, Strong, & Ziegen, 2014). They are also more capable and experienced, and these characteristics enhance the synergetic governance of the board (Abdul Rahman & Ali, 2006; Zahra & Pearce, 1989). According to some researchers, larger boards are more effective because they can offer a broader perspective and better guidance for the strategic options of the firm (e.g., Pearce & Zahra, 1991). Some researchers asserted that board size affects board effectiveness in the following ways: First, larger boards are likely to have more knowledge and skills at their disposal and second, the abundance of perspective they assemble is likely to enhance cognitive conflict (Forbes & Milliken, 1999).

(c) Board Independence

The presence of a powerful independent group of non-executive directors (NEDs) is an alternative controlling device for monitoring the executive directors (proposed in the Cadbury code) (Whittington, 1993). The independence of directors refers to the proportion of the independent NEDs on the board. Independent directors have a responsibility for the independent monitoring of managers. They have essential knowledge, abilities, and motivations, to control and monitor executives. As a result, agency costs, which are created due to the separation of ownership and control, are reduced (Fama, 1980; Fama & Jensen, 1983; Agrawal & Knoeber, 1996; Brennan &

McDermott, 2004). The independent non-executive directors on the board obtain more experience and better information about the company and its managers. Hence, their capability for effective oversight of the financial reporting process is enhanced (Duchin, Matsusaka, & Ozbas, 2010). It is a general belief that the more external directors there are on a corporate board, the more effective it is in conducting its wealth maximisation responsibilities to shareholders. It is achieved through the board's capability in monitoring and controlling the inefficient behaviour of executives (Mashayekhi & Bazaz, 2010; Alkdai & Hanefah, 2012). Also, independent directors have a positive impact on the quality of directors' decisions, and they can provide strategic guidelines, which may improve performance (Pearce & Zahra 1992).

On the contrary, some studies argue that independent directors often lack experience and information about the firm, are too busy to contribute effectively, do not bring the requisite skills to the job, and may owe their position to management. The independent directors are afraid of losing their position in the company in the future. That is why they are encouraged or sometimes forced by management to agree with the decisions made by managers to protect their jobs (Hermalin & Weisbach, 1991; Hart, 1995; Osma & Noguera, 2007). Thus, Raheja (2005) claims that the inclusion of insiders is needed because they are an essential source of firm-specific information that can enhance decision-making. However, she warns of the potential for distorted objectives due to private benefits and lack of independence from the CEO.

Moreover, it is claimed that the ability of the independent directors to monitor the managers is less than insider directors because they lack adequate specialist knowledge about the internal operations of the company. Some researchers discuss since the independent directors are often the part-time workers, their ability to monitor and advise the board is undermined. Because they do not possess adequate information about daily activities, which will decrease their ability to exert their function effectively, therefore, if

a large number of independent directors dominates the board, the decisions will be in lower quality (Agrawal & Knoeber, 1996; Weir & Laing, 2002; Bozec, 2005; Jiraporn, Singh, & Lee, 2009).

(d) Non-CEO duality

The other significant variable of CG is the non-CEO duality that affects the board's effectiveness. CEO duality describes the leadership structure of the board when the chairman and CEO are both one person. Fama and Jensen (1983b) argue that the positions of board chairman and CEO should be separated to avoid conflicts of interest and to mitigate the agency problem. Additionally, in the Cadbury (1992) reports on the CG of the UK firms, it is warned that opportunistic behaviour by the insiders is highly probable where these two positions are not separated. Nevertheless, there is no agreement in the previous studies about whether the separation of these positions increases the efficiency and effectiveness of the board.

When the CEO duality exists, this signifies the concentration of decision-making power and prevents board independence and lowers the board's ability to play oversight roles. Consistently, Klein (2002a) states that a CEO with too much control over board responsibilities can easily manage earnings.

When the CEO also acts as the board chair, the performance of the board in terms of effectiveness and efficiency in increasing the wealth of shareholders is compromised (Bliss, 2011; Mashayekhi & Bazaz, 2010; Ogeh Fiador, 2013). Moreover, Lin and Liu (2009) argued that, when the board of directors' chairman does not occupy the position of CEO (non-CEO duality), he can govern the firm more impartially. Hence, the monitoring role of the CG mechanism is improved.

(e) The frequency of Board Meetings

The previous research has employed the number of board meetings as a dimension of board activity because more active boards are believed to monitor the management more effectively. Attendance in the board meetings is one of the significant responsibilities of the directors, especially of the outside directors, because, through the board meetings, information can be gathered, decisions can be made, and the management can be monitored by the directors (Adams & Ferreira, 2008).

Vafeas (2000) indicated that the frequency of board meetings is considered as an important factor to perform its regulatory duties effectively. He showed that diligent boards that have frequent meetings are expected to execute their responsibilities based on shareholders' interests. Then, the performance of business units is improved. It is evident that the board of directors, which has frequently attempted to hold meetings, can devote more time to issues related to financial reporting and thus help to improve its quality. Xie et al. (2003) discuss that the board does not meet frequently might have less time for focusing on problems such as earnings management. He might only have time to listen to the presentations of managers and sign their plans. It indicates that the diligence of the board influences performance and efficiency, and it is a significant element in restricting earnings management.

Lipton and Lorsch (1992) and Byrne (1996) investigated the association between effective monitoring and board meetings. Their finding showed that if the boards meet regularly, they guarantee that the corporation is working in line with the shareholders' interests. Also, Kamardin and Haron (2011) argued that the high number of the board meetings implies the directors' knowledge concerning the corporations' activities, and indicates that they can monitor the strategy implementation in the firm. Chen, Firth, Gao, and Rui (2006) also pointed out that a high percentage of board meetings may be representative of the board's awareness of the company's activities. Nevertheless, Jensen

(1993) stated that the frequency of the board meetings might not be a good representative for specifying the board's effectiveness because other factors should also be taken into account (e.g., the duration of the meetings).

2.2.3.2 Oversight Function: Audit Committees

Firms' financial crises have recently raised questions concerning audit committees' responsibilities in mitigating accounting manipulation. They are expected to protect investors' interests and monitor opportunistic managerial behaviour (Ebrahim, 2007).

Thus, much attention has been paid to the reality that the responsibility of the audit committee is to assure that management prepares the financial statements reliably and selecting external auditors verify them pursuantly. The audit committee also has the responsibility of overseeing for CG and the financial reporting process. Moreover, they check and supervise internal control structure and audit functions. They also monitor the management, internal auditors, and external auditors (Klein 2002a, Rezaee, 2003).

The audit committee performs as a referee between management and auditors. The audit committee oversees and monitors the managers' discretion over the accounting policy. Consequently, audit committees should be independent of management to be able to monitor effectively, which reduce the opportunistic behaviour of management such as earnings management (Bradbury et al., 2006; Habbash, 2010).

Rezaee, Olibe, and Minmier (2003) maintain that the evolution of audit committees represents many firms voluntarily establishing audit committees in the mid-twentieth century to provide more effective communication between the board of directors and external auditors.

According to Xie et al. (2003), the responsibility of the audit committee is to make communication with the management, internal and external auditors, and the board of

directors to ensure that appropriate controls are applied, and reporting processes are effective.

Audit committees are standing committees that are constituted by a non-executive and independent board of directors. The audit committee members should have financial literacy, be qualified professionally, have operational knowledge, and have functional independence so that they can effectively perform their oversight responsibility. There should be regular meetings between the audit committee and the board of directors, CEO, CFO, controller, treasurer, director of the IAF, and external auditors as a group. Besides, there should also be private meetings with these members individually for reviewing and evaluating the integrity and reliability of financial reporting (Rezaee, 2004; Gillan, 2006).

(a) Audit Committee characteristics based on Listing Requirement of Bursa Malaysia

According to MCCG 2012, the compliance of the financial statements with the financial reporting standards should be ensured by an audit committee. As mandated by the Listing Requirements of Bursa Malaysia, a listed company should assign an audit committee selected from its directors, and it should have at least three members. It also stipulates that a majority of the audit committee members should be independent. MCCG 2012 excludes the executive directors from membership, and thus, implies that the independent audit committee is desired. The Bursa Malaysia CG Guide 2012 prescribes a minimum of four meetings per year for the audit committee. As mandated by the MCCG requirements and Bursa Malaysia Listing Requirements, to evaluate the financial expertise of the audit committee, at least one member of the audit committee should be the Malaysian Institute of Accountants (MIA) member. As noted by the MCCG 2012, there should also be policies and procedures in the audit committee to assess the suitability and independence of external auditors. The Bursa Malaysia CG Guide (2009) specifies at least one meeting every quarter of the financial year for the audit committee

of a listed company. Therefore, all listed companies should follow this requirement of Bursa Malaysia.

Consequently, according to Bursa Malaysia Corporate Governance Guide 2012, to investigate the effectiveness of the audit committee, the following characteristics of the audit committee should be taken into consideration. These attributes comprise audit committee size, audit committee independence, the frequency of audit committee meetings, and audit committee expertise. Audit committee size is the number of directors on the audit committee. Audit committee independence refers to the proportion of the independent directors on the audit committee. The audit committee expertise means the number of directors on the audit committee who has financial knowledge and expertise. The audit committee's frequency of meeting is the number of meetings is held by the audit committee members in a year.

(b) Audit Committee Size

The size of the audit committee is described as the total number of directors present in the audit committee. Audit committee size influences the overall strength of audit committees. There could be a small and large size of the audit committee based on its number. There are some arguments about the audit committee size in the CG literature.

Some scholars posit that when the audit committee size is small, they are more effective monitors (Al-Matari et al., 2012; Aldamen et al., 2012; Al-Rassas & Kamardin, 2015b). These studies follow agency theory, which indicated that small audit committees are more effective because they do not have coordination and communication problems. Moreover, according to Bédard and Gendron (2010) who review the literature about audit committee size, the size of the audit committee seems to be not a significant factor of effectiveness. They debate that there are some problems to communicate, coordinate, and make decisions related to a larger audit committee.

Contrary to the view mentioned above, the Blue Ribbon Committee (BRC) on financial reporting (1999) asserted that the audit committee's responsibilities and the complex nature of accounting and financial matters suggest that audit committees should include at least three directors. According to Mangena and Tauringana (2008), the complexity of the accounting and financial reporting matters reviewed by the audit committee requires considerable director resources, including the number of directors and time devoted to the work of the committee. Small audit committees with a low number of directors have weaknesses. Then, management can easily convince the small committee to support him in any disagreement with the auditor (Dezoort & Salterio, 2001; Ebrahim, 2007).

Furthermore, it seems that the larger audit committees are more powerful, gain more resources, have a lower cost of capital, and are more experienced than the smaller audit committees (Pincus, Rusbarsky, & Wong, 1989; Kalbers & Fogarty, 1993; Felo, Krishnamurthy, & Solieri, 2003; Anderson, Mansi, & Reeb, 2004). Braiotta (2000) describes that the audit committee should be large enough to have members with a range of professional judgment and experience but not so large as to be unwieldy. Beasley and Salterio (2001) and Ghosh, Marra, and Moon (2010) believed that a larger audit committee size provides better monitoring due to their skills and knowledge.

(c) Audit Committee Independence

Independence of the audit committee as an essential characteristic affects the efficiency of the committee in managing the financial statements' process significantly (Baxter & Cotter, 2009).

The CG committees worldwide, such as the Smith Committee (2003) and BRC (1999), have explicitly stated that the inclusion of independent members in the audit committee is a preference. In the USA, the BRC (1999) especially recommends that all audit

committee members should be independent directors. It was advocated in England that the audit committee should consist of three members, and it is recommended that all members must be independent non-executive directors (Smith Committee, 2003). Beasley and Salterio (2001) state that the companies enhance the audit committee strength by the inclusion of a larger proportion of outside directors in the committee compared to the minimum number as prescribed by legislation. Meanwhile, SOX asks the firms to have audit committees with at least one independent director who is not an affiliate of the company. Moreover, it requires that the independent director does not accept any compensation from the company other than the director's fees (Mohamad-Nor, Shafie, & Wan-Hussin, 2010).

Abbott et al. (2004) maintained that a more independent audit committee is related to better monitoring for at least two reasons. First, independent directors do not have personal or economic interests in the company that may interfere with their ability to question management (Carcello & Neal, 2000, 2003). As a result, they can frankly express their ideas and disputes without scare or interest (Beasley et al., 2000). Second, each independent director in the audit committee has a unique motivation to provide better monitoring to preserve and develop their reputation (Abbott et al., 2004).

Contrary to the opinions mentioned above, some scholars explain that an increase in the number of non-executive directors in the audit committee results in lower quality of the internal control mechanism within an organisation. If internal control is weak, management will be motivated to manipulate earnings (Fodio, Ibikunle, & Oba, 2013; Kantudu & Samaila, 2015).

(d) Audit Committee Activity or Frequency of Audit Committee Meeting

CG codes have also highlighted the audit committee's activity as an alternative characteristic. According to the National Committee on Fraudulent Financial Reporting

(the Treadway Commission) (1987), an audit committee that intends to have an essential role in monitoring and oversight function would need to maintain a high level of activity. An independent audit committee is unlikely to be effective unless the committee is also active (Menon & Williams, 1994). Larcker et al. (2007) declare that the frequency of audit committee meetings is a witness for the audit committee monitoring function. Thus, there should be regular meetings of the audit committee where the main subjects are reviewed and disputed, the outcomes of the responsibilities' fulfilment are recorded, and the obligations and commitments are specified. As recommended by the BRC on audit committees (in the USA), there should be a minimum of four meetings annually for the audit committee. Because the financial reporting in the UK should be provided every half of the year, the audit committee meetings should not be fewer than three meetings per year according to the Guidance on audit committees in the UK (Mohamad-Nor et al., 2010).

According to the previous research, the number of meetings held by the audit committee was used as a factor in measuring the following cases: the audit committee members effort and persistence in completing the assigned tasks (Dezoort, Hermanson, Archambeault, & Reed, 2002), the directors monitoring activity (Collier & Gregory, 1999), and the diligence level of the audit committee (Xie et al., 2003; Song & Windram, 2004).

Raghunandan, Rama, and Scarbrough (1998) and Abbott et al. (2004) argue that by meeting frequently, the AC will remain informed and knowledgeable about accounting or auditing issues and can direct internal and EA resources to address the matter in a timely fashion. During the AC meeting, the problems encountered in the financial reporting process are identified. Still, if the frequency of the meetings is low, the issues may not be rectified and resolved within a short period.

On the contrary, Al-Rassas and Kamardin (2015b) believe that the discretionary accruals level is raised by the increased frequency of audit committee meetings. This finding is not compatible with the claims of resource dependence and agency theories. According to these theories, the internal monitoring may be boosted by increasing the number of audit committee meetings, and more transparent financial reporting would be obtained using the expertise of the directors in the audit committee meetings. It can be justified in the way that a high focus of the ownership influences independence of the directors, resulting in ineffective audit committee meetings.

(e) Audit Committee Financial Expertise

It is explained that the audit committee can effectively carry out its monitoring responsibilities if the members of the audit committee are well qualified in the accounting field and enjoy the right level of financial literacy (Lin, Li, & Yang, 2006). Jensen and Meckling (1976) define the agency relationship as a contract under which one or more persons, i.e., principals (stakeholders), engage another person such as an agent (audit committee) to act on their behalf. Thus, the audit committee must perform the task diligently with the skills, knowledge, and expertise that they have acquired to produce quality financial reporting (Puat Nelson & Devi, 2013).

According to Felo and Solieri (2009), the audit committee members can be classified as the financial experts if they possess the following qualifications: the experience of working in the financial or accounting fields, the achievement of the professional certification in the accounting field, or experience in other financial monitoring areas. Financial literacy is defined as the ability to read and understand financial statements. Financial expertise refers to the past working experience or professional certification in accounting or finance fields (McDaniel et al., 2002). As advocated by the BRC, the audit

committees should be comprised of the members possessing financial literacy, and at least one audit committee member being a financial expert (Cohen et al., 2004).

Krishnan and Visvanathan (2008) explain that accounting and financial experts in the audit committee improve the effectiveness of the audit committee in two ways. First, the accounting and financial experts can mitigate earnings manipulation by evaluating the adequacy of provisions for warranty obligations, lawsuits, and other contingencies. Second, audit committee financial experts can better understand the nature of explanations provided by management. Further, according to Mangena and Taurigana (2008), knowledgeable audit committee members have a better perception of financial reporting issues and auditor judgments. Hence, they can monitor the financial reporting process effectively.

2.2.3.3 Audit Function: Internal Audit Function

Many organisations have started viewing the internal audit function (IAF) as one of the main factors of the CG since 1940 (Moeller, 2004). Its responsibilities have also altered over time (Grambling, Maletta, Schneider, & Church, 2004). Since the internal auditing concentrate on the internal controls as well as risk management, the internal audit likely plays a significant role in CG. Therefore, companies get more awareness about the advantages of internal auditing (Carcello, Hermanson, & Raghunandan, 2005; Chambers, 2005). According to the European Confederation of Institutes of Internal Auditing (ECIIA, 2008), the increasing number of internal auditors in Europe over the last years indicates the importance of IAF (Sarens, Abdolmohammadi, & Lenz, 2012).

It is well known that the Institute of Internal Auditors (IIA) has a significant role in the promotion of the IAF as an essential factor of the CG. The publication of the internal audit's definition in 1999 is the most salient sign of it. In this publication, the internal auditing is explicitly described as an activity "helping the organisation achieve its goals

by the provision of a well-regulated and systematic approach for the assessment and improvement of the effectiveness of control, risk management, and governance processes” (Sarens et al., 2012).

The IIA has led to the promotion of the IAF as an independent activity that offers value-added guarantee and consultancy services. By way of this extended role, the function has become a foundation for an effective CG (IIA Professional Guidance, 2002).

Assuring the effective operation of the company’s management and control system is the ultimate goal of the internal audit activity. It should ensure that the system operates according to the regulations, and the operations are conducted correctly without any errors. The internal audit evaluates the controls and procedures, and accordingly, assists firm to act in line with the regulations and standards, and ensure those charged with governance that internal processes of the company are functional and sufficient (Morariu, Gh, & Stoian, 2008).

(a) Internal Audit Characteristics based on Listing Requirement of Bursa Malaysia

The growth in the recognition and empowerment of internal auditors in Malaysia is observed in the past few years (Mahzan, Zulkifli, & Umor, 2012). The main incentive in increasing attention to the IAF in Malaysia was the Asian Financial Crisis (1997-1998). In March 2000, MCCG (The High-Level Finance Committee on CG, 2000) mandated the boards in the firms to establish strong internal controls and recommended the establishment of an IAF. In cases with no IAF, the boards should explain that the internal controls of the company are adequately reviewed regularly. Additionally, the Malaysian Securities Commission in 2001 delegated the duty of establishing an industry task force to the Institute of Internal Auditors Malaysia (IIAM, 2002) to set standards and guidelines on the IAF establishment.

Despite silence of the MCCG (2007) concerning the internal auditors' role, responsibilities, and duties, the revised MCCG and Bursa Malaysia Listing Requirements in 2012 concentrated on some internal audit reforms and particularly: (1) required the IAF for all listed companies; (2) identified the head of internal audit; (3) stated that the head of internal audit should have the relevant qualifications and be responsible for providing assurance to the board that the internal controls are operating effectively; (4) argued that internal auditors should carry out their functions according to the standards set by recognised professional bodies; (5) required the head of internal audit to report directly to the audit committee, and be responsible for regular review of the internal control, risk management, and governance processes within the firm; (6) required the audit committees to review adequacy and competence of IAF; (7) ensured that the board asked the IAF head to provide formal feedback regarding the sufficiency of the internal control and risk management at least once annually; and (8) mandated disclosure on information pertaining to the IAF in the annual reports of listed entities.

The revised MCCG and Bursa Malaysia Listing Requirements in 2012 focused on mandating the IAF for all listed companies and also forced those companies to operate IAF efficiently and report it effectively. Therefore, the experience and independence are the most critical determinants of the IAF's effectiveness. They are defined by the following sections.

(b) The Experience of Internal Audit Function

The internal audit department is encouraged to employ more competent staff. It means that hiring more competent internal audit staff may help reduction of the control problems; therefore, more robust controls for the financial reporting process would be provided (Lin, Pizzini, Vargus, & Bardhan, 2011). In agreement with this statement, previous studies report that the external auditors evaluate the competence of the internal

auditor based on the acquired professional certifications (Brown, 1983) and the experience of IAF staff (Messier & Schneider, 1988). A more experienced internal audit with higher training is more able to assure the efficiency and effectiveness of organisational controls in line with corporate strategies (Hutchinson & Mat Zain, 2009).

Additionally, according to prior research, the internal auditor would provide a high-quality audit if he is professionally qualified and has previous experience (e.g., Brody & Lowe, 2000). Boo and Koh (2004) found that the attributes and quality of the internal audit team are associated with their capacity in improving operational efficiency, internal control systems, financial issues, and risk management. In this regard, DeZoort (1998) maintained that the inexperienced internal audit members lacked the knowledge concerning the auditing areas. Thus, they were not able to identify the potential areas of fraud and could not understand management's incentives for the manipulation of earnings. Also, the familiarity of an internal auditor with the structure and accounting information system of the firm is more than an external auditor, which strengthens an internal auditor's experience about the potential areas of fraud.

The experience of IAF as an evaluation of IAF's competence is defined by Lin et al. (2011) and Prawitt et al. (2009) as the average number of years of internal auditors' experience in the IAF. However, Johl et al. (2013) define the experience variable that differs from Prawitt et al. (2009) and Lin et al. (2011), in which they only use experience, and it is measured by using the number of years since the year of IAF establishment. Following Johl et al. (2013), this study utilises experience as a proxy to measure the effectiveness of IAF.

(c) The Independence of the Internal Audit Function

The independence of the IAF seems to be essential to assure that the internal auditors can provide effective monitoring of the financial statements' preparation (Rezaee, 2004).

The concept of internal audit independence (to be independent of the company) has different definitions in the internal audit literature. The internal audit department of a company can undertake IAF in the form of in-house or outsource to other professional companies. Outsourced internal audit refers to internal audit services that are conducted by independent accounting firms (Carcello et al., 2005; Desai, Gerard, & Tripathy, 2011). Gramling & Hermanson (2006) explain that the external auditors consider internal auditors as independent when the internal auditors are not the firm's staff.

The academic and professional internal audit literature regarding the outsourcing of internal audit activities has two dimensions. On one side, it is argued that in-house internal auditors have more commitment and in-depth firm-specific knowledge (Carey, Subramaniam, & Ching, 2006). Some studies have explained two advantages for the in-house IA function. First, these studies maintain that in-house IAF provides better internal monitoring and control over the auditing activities, thereby protecting proprietary information, providing a better understanding of business processes and associated risks from outsiders and nonemployees. Moreover, the in-house internal audit would better give the firm's staff opportunities for learning compared to an outsourced internal audit (Del Vecchio & Clinton, 2003). Second, in-depth firm-specific knowledge, loyalty, excellent training ground, and role in controlling the critical situations such as fraud cases are among advantages of in-house internal audit function (Barr & Chang, 1993; Carey et al., 2006).

As claimed by the advocates of in-house IAF, outsourcing the IAF has three disadvantages: First, the outsourced internal auditors do not understand the business as well as in-house internal auditors, lack commitment to the company they are auditing, and may not adopt the auditing approach to the client's situation. All of these cases may weaken the ability of the outsourced internal auditors to detect or deter inappropriate accounting (Grant Thornton, 2007). Second, outsourcing all or a portion of the IAF

provides management with the flexibility of adjusting IAF costs during the year because outsourced IAF hours are inherently variable. In contrast, in-house IAF hours are fixed in nature due to salary structures. Then, outsourced IAF activities can allow management to defer expense recognition into subsequent accounting periods by simply scheduling outsourced IAF activities into the following years. This contracting flexibility may be especially attractive to managers when the firm is faced with revenue shortfalls (Abbott, Daugherty, Parker, & Peters, 2016). Third, as noted by Abbott, Parker, Peters, & Rama (2007), in the presence of IAF outsourcing, the in-house IAF is discouraged from opposing the management regarding the issues. It is because they are concerned about their job status. If an internal audit feels that he may be replaced as a consequence of outsourcing, his willingness to report the misstatements would be undermined because he may be afraid of losing his job in the firm.

On the other side, the proponents of outsourcing emphasise the external providers' (usually a public accounting firm) specialist expertise, flexibility, and cost-effectiveness (Caplan & Kirschenheiter, 2000). Moreover, as claimed by the proponents of internal audit outsourcing, the in-house internal auditors have less independence compared to the outsourced internal auditors. As they argue, an employee is hardly independent of the management (James, 2003; Ahlawat & Lowe, 2004). According to the prior research, when the management does not influence internal auditors, the assessment of internal audit by the external auditors would be more reliable and effective (Margheim, 1986). Glover, Prawitt, & Wood (2008) also found that when there is a high internal risk, external auditors trust in the work of outsourced rather than in-house internal auditors.

When a firm outsources its internal audit, it is mostly outsourced to the firm's external auditor (Carey et al., 2006). This rate/percentage may have shown variation because of the Sarbanes-Oxley Act (Sec. 201g) that prohibited the outsourcing of internal audit services to firms' external auditors (Sarbanes-Oxley Act (SOX), 2002). The regulation

was changed because it was believed that this type of outsourcing might create financial bonding between audit firms and their clients. Therefore, the external auditor might not be encouraged to take action in coping with misleading or fraudulent financial reporting (Prawitt, Sharp, & Wood, 2012). Nevertheless, outsourcing internal audit activities to the parties that are not the external auditor of the firm are not prohibited by the SOX (Swinkels, 2012).

Therefore, according to James (2003), Ahlawat and Lowe (2004), and Al-Rassas and Kamardin (2015a), this study defines independence of IAF while the IAF is outsourced to some companies that provide professional service.

2.2.3.4 Assurance Function: External Auditing

Audit functions have existed since the 13th century. These functions ensure that the financial information prepared by the managers accurately reflect the financial status of the company (Watt & Zimmerman, 1983).

The internal controls of the client are reviewed and evaluated by the external auditing, which is a part of the governance mechanism. An external auditor audits the client's financial statements to avoid material misstatements. Higher quality auditors are not eager to accept doubtful accounting approaches. Moreover, external auditors are more likely to announce errors, inconsistencies, and irregularities identified during their work. Hence, it can be stated that the external auditor can affect the efficacy of the monitoring task and the earnings management incidence within the firm.

The agency theory states that the audit function serves as a mechanism for decreasing the ambiguity and the information asymmetry among the shareholders and management. As shareholders and investors have limited access to internal information from within a firm, the independent audit provides reports about the fairness and honesty of the financial reporting prepared by the management. As noted in the International Standard of Auditing

(ISA) (the UK and Ireland) (ABP, 2009: 2-3), following is the ultimate goal of the independent auditor and the implementation of an audit:

“An audit intends to improve the confidence level of the users in the financial statements. If the auditor expresses that the financial statements have been prepared in all material respects according to the applicable financial reporting frameworks, this goal is achieved. As the basis for the auditor’s opinion, ISAs (UK and Ireland) ask the auditor to present the guarantee that the financial statements are free from errors, fraud, or misstatement. That is, they are asked to provide a reasonable assurance, which is the high level of assurance.”

Variations in the level of conflict and information asymmetry are assumed to differ from firm to firm and may demand different levels of auditing and of audit quality (DeAngelo, 1981; Watt & Zimmerman, 1986). The higher the agency cost, the larger the information asymmetries’ gap, and thus, the higher the levels of audit quality will be demanded.

The external auditors in CG do auditing of the financial statements and give credibility to the published financial statements. They also reasonably assure that investors receive effective, relevant, reliable, transparent, and useful financial information for making the right business decisions. The expectancy of the users of audited financial statements is the detection of fraud cases and illegal activities in the financial statements by the external auditors. The illegal acts committed by the employees may influence the integrity and quality of the financial reports. External auditors, however, in identifying the importance of finding fraudulent financial transactions, and in complying with their professional standards, are more concerned with material misstatements in audited financial reports (Rezaee, 2002, 2004).

(a) External Auditing Characteristics based on Listing Requirement of Bursa Malaysia

MCCG requirements and Bursa Malaysia Listing Requirements state that in appointing an external auditor, a listed issuer must consider among others (a) the

adequacy of the experience and resources of the accounting firm; (b) the persons assigned to the audit; (c) the accounting firm's audit engagements; (d) the size and complexity of the listed issuer's group being audited; and (e) the number and experience of supervisory and professional staff assigned to the particular audit. Moreover, according to MCCG 2012, external auditors should be independent, to access effectiveness. When non-audit services (NASs) are provided to the company, external audit independence can be impaired. The audit committee should have procedures and policies to evaluate external audit independence (MCCG, 2012).

Therefore, based on the MCCG requirement (2012), audit firm size, audit fee, and audit independence are considered as important factors in measuring external audit quality in this study.

(b) Audit Firm Size

Studies conducted on audit quality are mostly focused on auditor selection. There is such a perception that the branded auditors or the specialist auditors of the industry provide higher audit quality (DeAngelo, 1981; Palmrose, 1988; Chen, Lin, & Zhou, 2005; Abdullah, Ismail, & Jamaluddin, 2008). The empirical studies used the Big-N indicator variable as a proxy in testing the hypotheses of auditor size and external audit quality (Gaeremynck, Van Der Meulen, & Willekens, 2008). Krishnan (2003) maintains that a Big-N audit firm is more encouraged for the protection of its reputation due to its larger client base. Additionally, DeAngelo (1981) states that large audit firms, notably Big 4 firms, have higher levels of independence, and therefore, provide a higher quality of the audit. Large audit firms have more concern to protect their reputations and more resources, which enable them to perform better auditing services, compared to small audit firms (Menon & Williams, 1991; Davidson & Neu, 1993). According to their research, it is expected that large audit firms are more competent than the small audit firms. Because

large firms possess great resources, hence, they can hire more experienced auditors, and have the capability of investment in high information technology. Therefore, the staffs are capable of providing high-quality audits as well as better consulting services to their clients.

The Big 4 auditors have the capacity to provide higher audit quality because of the following reasons: they have many numbers of clients, many resources, technology and trained staff for the audit work and they will not care to lose any client due to his insincerity and breach of the process (Miko, 2015).

John (1991) proposed a model of the determinants of the optimal size and structure for the auditing firms, in which he indicates that the auditor quality is linearly increased with the size (Teoh & Wong, 1993).

Thus, to specify audit firm size, this study uses a dummy variable named BIG4, taking the value 1 if the firm was audited by a Big 4 auditor, otherwise 0.

(c) Audit Fees

The second indirect measure of the audit quality introduced by previous studies is audit fees. The audit fees are utilised as an indicator of the audit quality in many studies because audit quality cannot be observed solely (O'Sullivan, 2000; Carcello, Hermanson, Neal, & Riley Jr, 2002; Salleh, Stewart, & Manson, 2006; Yatim et al., 2006; Goodwin-Stewart & Kent, 2006; Srinidhi & Gul, 2007; Bliss, Gul, & Majid, 2011). Using the audit fee as an indicator of the external audit quality, Yassin and Nelson (2012) showed that the higher audit fees represent the provision of more efficient audit services by the auditors to the clients as compared to the lower audit fees.

Srinidhi and Gul (2007) argue that audit fees are more likely to reflect the auditor's effort; it is because of the strict regulation of the audit market. Thus, opportunities to earn rents are limited. There is a general assumption that because of the more audit monitoring

efforts in the larger audit firms, they can charge higher audit fees. Thus, it can be stated that a high audit fee produces more effort in the process of auditing and higher audit quality. Yuniarti (2011) studied the relationship between the factors affecting the audit quality in 24 Bandung firms in 2009. He suggests that higher audit fees increase and improve audit quality due to auditors' effort. The accounting firm should increase the audit fees that lead to higher audit quality. He also found that audit fees are significant and positively affect audit quality.

Conversely, DeAngelo (1981) suggests the necessity for the financial independence of the auditor from his clients. However, in the case of the audit firm's reliance on a specific client, the economic theory proposes that when the auditors gather high income from a particular client, it is likely that the auditor loses his goal because the financial bonds are created between him and the client. Thus, the auditor is not able to present reports against the client because of the dependence on him. Consequently, audit quality is decreased.

According to the studies mentioned above, this study uses audit fees as the second proxy to measure external audit quality.

(d) External Audit Independence

Independence is one of the essential factors for external auditors in discharging their auditing functions adequately. Since auditor independence is not easy to observe, previous researchers, in this case, have utilised some proxies to evaluate the external audit independence, such as non-audit services (NASs).

When NASs are supplied for the firm, the independence of external auditors may be diminished. Therefore, the audit committee should create some policies governing the conditions under which contracts for the provision of non-audit services can be entered into and procedures that must be followed by the external auditors. To provide support for an assessment of the independence, the audit committee should take written assurance

from the external auditors confirming that they stay independent in the audit process pursuing the terms of all relevant professional and regulatory requirements (MCCG, 2012).

To answer this question, whether payments from firms to external auditors for non-audit services compromise the integrity of the audit process, Frankel, Johnson, & Nelson (2002) conclude that the payments by the firm for these services can put the auditor's independence at risk (Gillan, 2006).

The previous studies suggest that the magnitude of the non-audit fee (NAF) may diminish the independence of the auditor. Because NASs have some drawbacks threatening independence. The self-interest threat is considered as the first drawback. The reliance of the auditor on the client may become higher when thinking of the future earnings that can be gained through the NASs to the client (Becker, DeFond, Jiambalvo, & Subramanyam, 1998). Hence, it is probable that the auditors deliberately neglect the breaches and violations of the client to protect their potential future revenues. However, some previous studies have documented that auditors are less likely to issue a going-concern modified audit opinion for clients that pay higher NAF (Sharma & Sidhu, 2001).

The intimidation threat is the second drawback. It is represented by the client's ability to select a different auditor in the future. It is a common threat in the auditor-auditee relationship. However, this threat raises in a situation in which the auditor may also lose payments for the consultancy services (Mayhew & Wilkins, 2003). According to some studies, NAS may diminish the independence when the auditor expects future fees, and when there is the replacement risk in the case of providing non-positive audit reports (DeAngelo, 1981; Simunic, 1984; Acemoglu & Gietzmann, 1997).

The self-review threat is the third NAF drawback. The responsibility of the auditors is to evaluate the internal control and accounting systems. Thus, auditors are evaluating their work, which can affect their independence. Auditors may be unwilling to criticise the

work carried out by their consultancy colleagues, because doing so may lead to the audit firm losing lucrative consultancy services (Bartlett, 1991). Thus, auditors may neglect the errors resulting from their own firm's advisory services during the audit process, and hence, put their independence at risk.

Finally, according to the studies mentioned above, this study considers the percent of the audit services' fees to total auditing fees as an evaluation method for the independence of external auditing.

2.2.4 The Interaction between Corporate Governance Mechanisms

2.2.4.1 The Interaction between Board of Directors and Audit Committee Mechanisms

There is nothing in the Sarbanes-Oxley (2002) that mandates the selection of powerful independent and informed audit committee members. However, it is generally probable that the stronger boards seek out audit committee members that show a higher tendency to confront management. In this case, Klein (2002a) suggested that the board's independence generally may influence the audit committee's independence.

According to Bliss, Muniandy, and Majid (2007), the audit fee that the external auditor receives would be reduced by an effective audit committee. In the firms where the CEO is dominant (e.g., in CEO duality cases), it is claimed that the activities of an effective audit committee (mostly composed of non-executive directors) may lead to a reduction of the audit fee that is paid.

As the previous studies suggest, the audit committees often compose of junior members of the board. The effectiveness of these members mostly depends not only on their financial reporting knowledge and expertise but also on the extent of the board's support and empowerment (Cohen et al., 2004).

2.2.4.2 The Interaction between Board of Directors and External Audit Mechanisms

Yatim et al. (2006) and Carcello et al. (2002) found that firms with strong CG characteristics (e.g., board independence, board expertise, and board meeting) demand more external monitoring and higher external audit quality leading to higher audit fees.

The impact of the governance mechanisms (e.g., characteristics of the board of directors) on the quality of the external audit (evaluated by external audit fee) was studied by some researchers (O'Sullivan, 2000; Salleh et al., 2006). Their finding indicated a significant relationship between the percentage of independent directors on board and the audit fee. Both studies found that the presence of the independent directors is an encouragement for assigning higher-quality auditors. It ensures that the shareholders that the financial statements of the firm would be faithfully represented.

2.2.4.3 The Interaction between the Audit Committee and Internal Audit Mechanisms

Bishop et al. (2000) consider internal audit as a great resource with the capacity to offer the necessary information for audit committees to meet their governance mandate. The Treadway Commission Report (1987) states that the SEC mandates all public firms to keep an organisationally independent IAF (National Commission on Fraudulent Financial Reporting, 1987). According to the IIA's Organisational Independence Standard, the chief audit executive (CAE) of the firm should report to a level that ensures the duties of IAF are complete and independent (IIA, 2007). An appropriate reporting relationship is necessary to ensure that the activities of internal audit are not affected by the management (Holt, 2012). Thus, the audit committee should appoint the chief internal auditor to achieve the independence of IAF. Besides, the chief internal auditor should be

accountable and report to the CEO, the audit committee, or a senior financial officer who is not directly involved in the preparation of financial statement (Rezaee, 2004).

A vital responsibility of audit committees is to ensure that the IAF's scope and duties are adequate, it is appropriately resourced, and that it has the necessary authority to carry out its work (e.g., risk assessment, control assurance, and compliance work) (Carcello et al., 2002; Gramling et al., 2004).

Concerning the audit committee, Drent (2002) asserts that it, in contrast with management, highly values the internal audit function's independence. Gwilliam and Kilcommins (1998) found that the presence of audit committees creates a perception of enhanced independence of the internal audit function and more reliable financial reporting among financial statement users. In supporting this view, Krishnan (2005) argues that the audit committee status is improved since it can rely on the work of IAF.

Braiotta (2000) claims that holding the individual meetings between the CAE and the audit committee enhances and protects the IAF's independence. A close relationship between internal auditors and the audit committee can potentially improve the CG capabilities of both parties (Cohen et al., 2004).

Similarly, Scarbrough et al. (1998) surveyed chief internal auditors (CIA). They found a positive relationship between audit committee independence and the frequency of meetings with internal auditors as well as a review of internal audit work. As reported by Raghunandan, Rama, & Read (2001), audit committees that meet the Blue Ribbon Report Recommendations to have independence and financial expertise, had more frequent and private meetings with internal auditors. They also reviewed the internal audit work more than those who did not comply with the recommendations.

2.2.4.4 The Interaction between the Audit Committee and External Audit Mechanisms

The firms with a larger size of the audit committee are more concerned about the reputation of the auditors, and they tend to assign the Big 4 auditors (Chen & Zhou, 2007). The empirical evidence indicates that the Big 4 auditors are appointed as higher-quality providers of auditing activities.

There is a highly complicated role for the auditors in the governance process; it is due to the auditors' interaction with other mechanisms in the governance mosaic, including the audit committee and the management (Cohen et al., 2004). For example, Chen et al. (2005) did not find any relationship between the availability of financial experts in the committee and the selection of a specialist auditor. On the contrary, Chen and Zhou (2007) found that the presence of a financial expert on a committee is associated with the choice of a Big 4 auditor. Consistent with Chen et al. (2005), other researchers also did not observe any relationship between the financial expertise of audit committees and the probability of an auditor change after a going concern report (Carcello & Neal, 2003). Lee, Mande, and Ortman (2004) suggest that auditors tend to work with the expert and independent audit committees.

Abbott, Parker, Peters, and Raghunandan (2003) observed a significant positive relationship between the independence and expertise of the audit committee and the audit fee. Similarly, Goodwin-Stewart and Kent (2006) revealed a significant positive relationship between the audit fees and the audit committee's existence and the audit committee meeting frequency. Moreover, Bliss et al. (2011) investigated the relationship between the independence level of the audit committee and the external audit quality. Their finding showed that audit committee independence is positively associated with audit fees. Hence, these researchers suggested that the audit committees with higher independence level demand higher audit quality.

2.2.4.5 The Interaction between Internal Audit and External Audit Mechanisms

Concerning the internal and external audit, some studies suggest the internal audit and external audit are substitutes for one another (Felix & Gramling, 2001; Ho and Hutchinson, 2010; Mohamed, Mat Zain, Subramaniam, & Wan Yusoff, 2012). Nevertheless, other studies suggest that the two types of the audit may be complementary; with an increase in both (i.e., internal audit and external audit works) when greater monitoring is required (Carey, Craswell, & Simnett, 2000; Goodwin-Stewart & Kent, 2006; Singh & Newby, 2010). Researchers found a positive relationship between audit fees and the use of internal audits (Goodwin-Stewart & Kent, 2006). According to their findings, if the firms engaged in a higher level of internal monitoring, they would also engage in a higher level of external monitoring. They also found that these firms' directors are aware of the importance of both audit types in enhancing CG.

On the contrary, Ho and Hutchinson (2010) found that internal audit contribution can serve as the substitute for substantive external auditing processes, and, thus, it is related to the lower costs of monitoring. Therefore, in Hong Kong, it is believed that the external auditors mostly rely on the activities of the internal auditors, and, as a result, receive lower fees. Mohamed et al. (2012) also observed both dimensions of the internal audit quality (internal audit contribution and competency) support the substitution views to justify the relationship between the internal audit quality and external audit fees.

2.2.4.6 The Interaction between Internal Audit and Board of Directors Mechanisms

Johl et al. (2013) state that the positive impact of internal audits on the enhancement of the financial reporting quality may depend on the strength of other corporate governance mechanisms such as the quality of the board of directors. For example, if other secure internal (or external) governance mechanism (e.g., powerful boards) is

already available in the firm, then having an internal audit with the equal strength may probably not be so valuable. Nevertheless, if firms lack strong boards, then having strong IAF should be particularly helpful. Also, it can be stated that powerful boards also need powerful IAF. Thus, they investigate how strong boards can change the impact of the IAF on FRQ. Their study also found that though coefficients of variables of board quality and internal audit quality have a negative relationship with abnormal accruals, the interaction variable between these two variables has a positive relationship with abnormal accruals. It shows there may be a substitution relationship between board quality and internal audit quality for maintaining the level of FRQ.

2.2.4.7 Justification of the Application of Key Players of Corporate Governance Mechanisms and their Interaction by this study

The results of some corporate governance research may be problematic when one or two characteristics or mechanisms are examined in isolation from others (Bhagat & Jefferris, 2002). Therefore, this study intends to illustrate that adopting four main mechanisms such as the boards, audit committees, internal auditors, and external auditors who must work together can be an appropriate approach to evaluate CG factors. Furthermore, Cohen et al. (2004) indicate interrelationships between the various players and mechanisms within the CG mosaic. For example, interactions among the audit committee, the external auditor, the internal auditor, and the board of directors are essential for the governance's effectiveness. Thus, this interaction should be taken into consideration to obtain competent results in this study.

Moreover, this study measures the quality and effectiveness of CG mechanisms and based on the characteristics highlighted by the Listing Requirements of Bursa Malaysia. This study also uses some determinants predominantly addressed by previous studies. For instance, to measure the quality of the board of directors, the board size, board

independence, the number of board meetings, and non-CEO duality are adopted. This study also addresses audit committee size, audit committee independence, audit committee activity (frequency of meeting), and audit committee financial expertise to evaluate the audit committee quality. Moreover, the experience of IAF and the independence of IAF are utilised to measure the quality of internal auditing. Finally, to measure the external audit quality, auditor firm size, audit fees, and audit independence are considered.

2.3 Financial Reporting Quality

2.3.1 Definition of Financial Reporting Quality

The next keyword in this paper is financial reporting. It is claimed that the quality of financial reporting is significant to allocate resources efficiently in capital markets. Analysts, regulators, investors, and institutional owners rely on financial information quality to invest and make decisions about the valuation of public firms (Mashayekhi & Abadi, 2011). Under this category, the FASB conceptual framework describes the FRQ related to the financial information's usefulness to the users of information (mostly defined as primarily investors and creditors).

2.3.2 Measurement of Financial Reporting Quality

Various ways can be used for measuring the quality of financial reporting. For instance, analyst rankings of disclosure quality, Standard and Poors (S&P) transparency and disclosure index, and earnings quality are the proxies that are commonly used for FRQ.

Frost, Gordon, and Pownal (2006) used the S&P transparency and disclosure index score as a proxy for FRQ. The calculation process for the S&P transparency and disclosure index is as follows: the percentage of disclosure items is taken from a list of

attributes (n = 35) in annual reports items (the scores on individual questions give the overall scores).

The higher audit quality (e.g., Big N) increases accounting information credibility through reducing aggressive and opportunistic financial reporting. The higher audit quality also reduces the litigation risk for fraudulent financial reporting. That is why auditor litigation can serve as a proxy for FRQ (Khurana & Raman 2004).

Many empirical studies (e.g., Sengupta, 1998; Healy, Hutton, & Palepu, 1999; Botosan & Plumlee, 2002) measure financial disclosure quality as analysts' ratings of disclosure quality (the Association of Investment Management and Research scores; AIMR scores). The AIMR scores consist of 3 categories: annually published information, other published information, and investor-relations and related aspects. The overall score is calculated through a weighted combination of the scores of three categories. Nevertheless, S&P disclosure scores and the AIMR scores indirectly measure FRQ, and, therefore, they are subjective and noisy measures (Cohen, 2002).

In addition to proxies of FRQ mentioned earlier, previous studies also focused on the alternative factors like the financial restatements (Larcker et al., 2007; Baber et al., 2012), and fraud (Beasley, 1996; Beasley et al., 2000). These factors have been used as an observance of financial reporting failure. Indeed, these factors explicitly constrain the attainment of high-quality financial reports (Cohen et al., 2004).

On the contrary, some other studies have shown the earnings quality or earnings informativeness as a proxy for FRQ (sections 2.3.3 and 2.3.4). The proxies of the quality of financial reporting are shown in Figure 2.3.

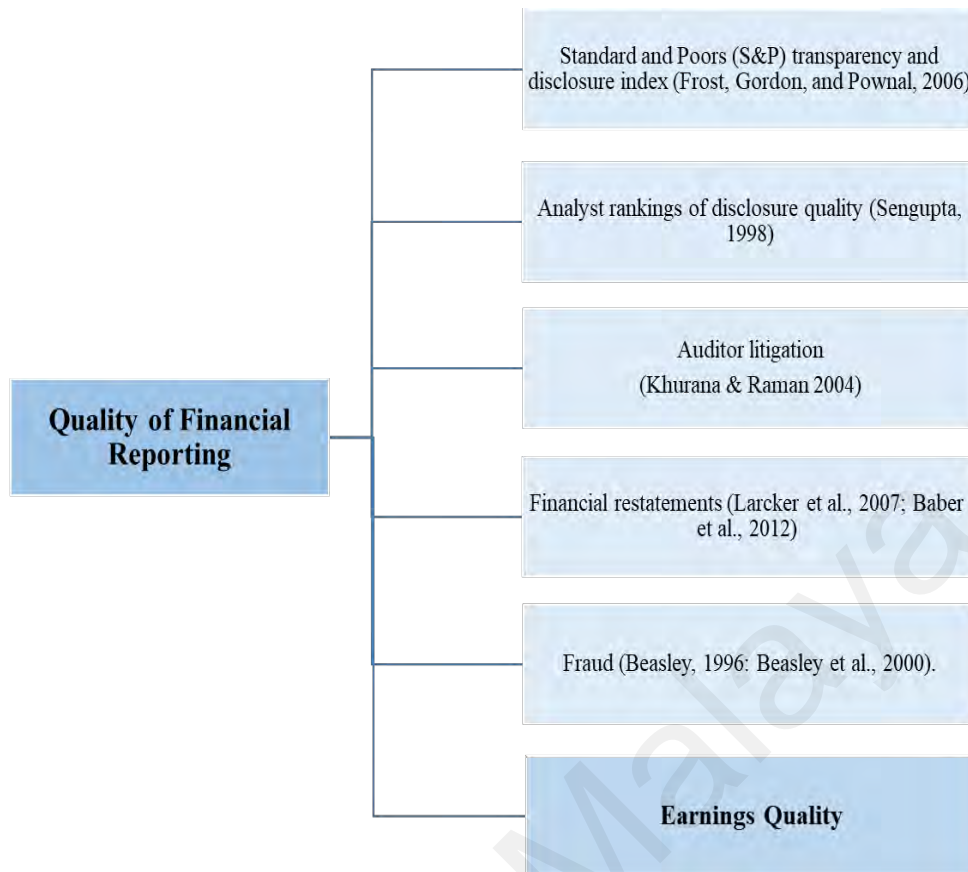


Figure 2.3: Various Proxies of the Quality of Financial Reporting

2.3.3 Definition of Earnings Quality

Earnings are widely believed to be a premier source of financial information in the marketplace, specifically for contracting purposes and security valuation (Lev, 1998; Schipper & Vincent, 2003; Francis et al., 2004; Johl et al., 2013). It shows that investors rely on earnings more than any other summary measure of performance (i.e., dividends, cash flows). The issue of earnings quality is crucial as users need to assess the quality of the information provided in the financial statements in doing reliable valuations. Financial analysts use earnings as a tool to measure firm performance to forecast future outcomes of securities (Siegel, 1982). The board of an organisation and the institutional shareholders utilise the earnings for the evaluation of the firm performance and management's quality. Shareholders also use earnings as a direct basis for awarding bonuses and as indirect reference points for awarding executive stock options for senior

managers (Peasnell, Pope, & Young, 2000). Besides, according to the standard-setters, earnings quality serves as indirect measures to assess the financial reporting quality (Schipper & Vincent, 2003).

As reported by Lev (1989) in Mahmud et al. (2009), earnings information is one of the significant types of information found in the financial statements. The analysts generally use this information by applying various ratio analyses to specify the firm's previous, current, and future ability to raise the shareholders' wealth. Earnings quality can be defined as the degree to which reported earnings capture the economic reality of the firm.

According to Healy and Wahlen (1999) quoted in Mahmud et al. (2009) and Pergola and Verreault (2009), financial statements will be less useful leading to inefficient resources allocation when the reported accounting earnings do not reflect the economic reality of the firm's financial activity throughout the reporting period. Although there are considerable numbers of academic research regarding the earnings quality, there is still no agreement on the earnings quality's definition. There is no consistency about what earnings quality is in the available current studies; it is because earnings quality is a multidimensional concept. Thus, different individuals consider it differently (Teets, 2002). Therefore, earnings quality is regarded as a conceptual phrase that can be defined in many different perspectives.

From a decision-usefulness point of view, when the earnings values are useful and effective means for decision-making purposes, then it is regarded that the earnings quality is high (Al-Dhamari & Ku Ismail, 2013; Habbash, 2019). Based on this perspective, different users of the financial statement are likely to define earnings quality notions in different ways. The following paragraphs describe the definitions from the perspective of analysts, investors, financial statement users, and standards setters.

For instance, Dechow and Schrand (2004) argue that the earnings have high quality when the earnings numbers accurately reflect the current operating performance of the

firm, are useful indicators of the future performance and are a good summary measure of assessing firm value. It is consistent with the objectives of financial analysts, which are to evaluate the performance of the company, assess the extent to which current earnings indicate future performance, and determine whether the current stock price reflects intrinsic firm value (Dechow & Schrand, 2004). The investors probably have similar goals. On the other hand, the creditors and compensation committees may have a different definition of high-quality earnings. They may define it as earnings that can be simply converted into the cash flows, and that is reflective of the real performance of the managers (Wan Ismail, 2011).

The financial statements' users may define the earnings quality in terms of the absence of earnings management, because the usefulness of earnings may be distorted by the deliberate earnings manipulation by the managers, within the boundaries in accounting standards (Wan Ismail, 2011).

The earnings would be high quality in the view of regulators when they comply with the generally accepted accounting principles (Dechow & Schrand, 2004). Earnings must be without the fraud, and provide an honest and fair representation of the firm's financial performance. Nonetheless, the formulators of the accounting standards also show concern about the effectiveness of the standards they have issued. The standard-setters can assess the earnings quality provided under a specific collection of the accounting standards by concentrating on the earnings numbers' usefulness to the users of financial statements (Wan Ismail, 2011).

2.3.4 The Importance of High-Quality Earnings

The existing studies used different methods for defining earnings quality. However, these studies emphasise the importance of the earnings quality for the financial information's users, regulators, practitioners, and accounting researchers because it is

considered that the reported earnings are the premier information in the financial statements (El-Sayed Ebaid, 2013). Salvato and Moores (2010) asserted that high-quality accounting information, such as earnings is essential for firms to access equity and debt markets. Thus, it can be stated that the earnings have an informative function, which is usually utilised as a basis for describing the firm's financial performance. For instance, the earnings numbers and different metrics and ratios that are originated from it are often utilised in debt contracts and compensation agreements (Schipper & Vincent, 2003). Also, the analysts use earnings to evaluate the past and present performance of the company and predict the future ability of the firm to create additional wealth for the shareholders (Wan Ismail, 2011).

According to Schipper and Vincent (2003), the importance of earning quality can be explained from at least two perspectives, the contracting perspective and investment perspective. From the contracting perspective, low earnings quality may lead to unintentional wealth transfers. For example, firms that rewards managers based on earnings may overcompensate the managers if earnings are overstated. From an investment perspective, poor earnings quality may mislead the investors and lead to improper allocation of the resources (Myers, Myers, & Omer, 2003; Schipper & Vincent, 2003). High earnings quality would also increase the attractiveness of stocks to outside investors and increase market liquidity (Young & Guenther, 2003), lower cost of debt (Salvato & Moores, 2010), reduce capital cost (Leuz & Verrecchia, 2000; Salvato & Moores, 2010), and promote more efficient capital allocation (Biddle et al., 2009; Bushman, Piotroski, & Smith, 2011). Thus, the reported earnings need to be high in quality.

2.3.5 Measurement of Earnings Quality

The academic researchers have identified and operationalised different aspects of the earnings quality constructs using specific characteristics of earnings and its components. The measures used in the literature as the earnings quality proxies are discussed in this section, the functions and limitations related to each approach are described, and examples of the utilisation of these approaches in those studies are provided.

Empirical studies of earnings quality typically use several proxies to measure earnings quality. For example, Francis et al. (2004) classified seven earnings attributes into the accounting-based attributes and market-based attributes. They identified persistence, accrual quality, predictability, and smoothness as accounting-based attributes because these are measured by using accounting information only. In contrast, value relevance, timeliness, and conservatism were classified as the market-based attributes since they are based on the relation between accounting earnings and returns. Figure 2.4 depicts the framework of some attributes to define earnings quality as the proxy for financial reporting quality.

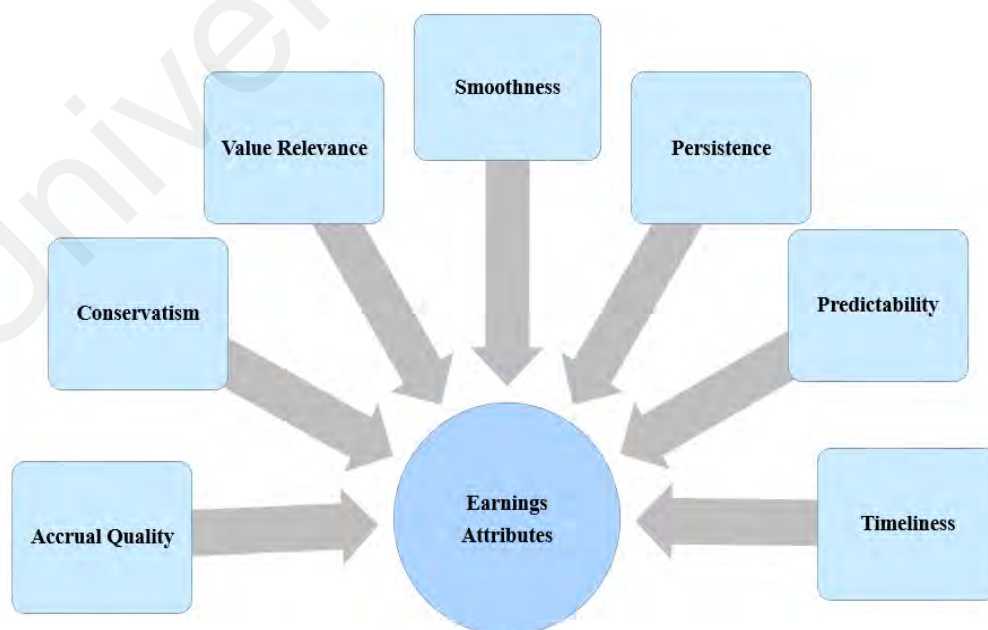


Figure 2.4: Framework of Some Attributes to Define Earnings Quality (Francis et al., 2004)

Jonas and Blanchet (2000) used a different perspective and evaluated the earnings quality by two different approaches: user needs and shareholder/investor protection. From the user perspective, the earnings quality should be assessed by the value-relevance and earnings persistence. In the view of shareholder/investor protection, it should be assessed by conservatism and accruals quality.

In general, earnings have high-quality when they have a high level of persistence, higher predictability, less volatility, more timeliness, lower level of earnings management, and higher accrual quality. There is plenty of research to describe and measure earnings quality by adopting different methods. The aim is to ensure descriptions of earnings attributes that do not consider a single attribute that may yield favourable or unfavourable results when compared to other earnings attributes (Francis et al., 2004). Furthermore, multiple measures increase the robustness of the findings and also reduces the concerns that the results of a particular test are caused by spurious relations (Burgstahler, Hail, & Leuz, 2006). Then, the following subsections discuss some measures, which have mostly been applied in prior research.

2.3.5.1 Accrual Quality

Among the methods are being introduced to measure earnings quality, the magnitude of abnormal accrual (discretionary accrual) is prevalent. In other words, abnormal accrual evaluates earnings management (Dechow et al., 1995; Jones, 1991; Healy & Wahlen, 1999; Xie et al., 2003; Chtourou, Bédard & Courteau, 2001; Klein, 2002a; McNichols, 2002; Dechow & Dichev, 2002; Chung, Firth, & Kim, 2002; Dey, 2005; Niu, 2006; Bradbury et al., 2006; Larcker et al., 2007; Jiang et al., 2008; Rich, 2009; Dimitropoulos & Asteriou, 2010; Mashayekhi & Bazaz, 2010; Chalaki et al., 2012; Abdel-Meguid et al., 2011; Ahmed, 2013; Johl et al., 2013; Mudah et al., 2018; Habbash, 2019). In other words, the discretionary accruals model that shows the level of earnings management is widely

used as an inverse and indirect construct to measure earnings quality. According to Schipper and Vincent (2003), the residuals or prediction errors from a regression of total accruals on accounting fundamentals represent earnings management. They are regarded as an inverse measurement approaches of earnings quality.

Total accrual can be calculated by the difference between net income (earnings) before extraordinary items and operating cash flow. According to the literature, total accruals (actual accrual) can be decomposed into non-discretionary (expected accrual) and discretionary components (abnormal accrual) (Jones, 1991). The non-discretionary component reflects business conditions and mandated adjustments to the cash flows of the firm required by standard-setters. However, the discretionary component reflects management's selection from a set of generally accepted accounting procedures. Thus, the discretionary part is argued to be a better proxy to capture a more significant portion of opportunistic managerial behaviour and then to measure earnings management (Healy, 1985; Jones, 1991).

Jones (1991) proposed a regression for controlling a non-discretionary component. He modelled a linear regression between total accruals and changes in sales, property, plant, and equipment (Dechow et al., 1995). Dechow et al. (1995) modified the original Jones model. That is, they included the changes in receivables to adjust the revenue changes. The modified Jones Model is considered as the most robust test to detect earnings management as compared to the premier model proposed by Jones (1991).

Ideally, changes in the working capital should move proportionately with changes in sales and changes in non-cash income statement items. For example, depreciation expenses should move proportionately with the level of property, plant, and equipment. However, in cases that the total accrual changes are not proportionate with these items relative to other companies in the same year and industry, the unexpected or discretionary portions of total accruals are assumed to be managed portions (Marquardt & Wiedman,

2002). These managed portions measure managerial manipulations and are observed as an inverse measure of the earnings quality (Siniah, 2015).

The aggregate accruals model, the specific accruals model, and the distribution of earnings after management model are the research designs that are mostly used for testing the earnings management (McNicholas, 2000). The aggregate accruals model, which was developed by Jones (1991), is the most favoured one among these three commonly applied research designs in the earnings management studies, and it is widely used in the research for earnings management measurement (McNicholas, 2000). Researchers have mostly concentrated on the total accruals to evaluate management's discretion over earnings (Marquardt & Wiedman, 2002).

Although the aggregate accruals model is extensively used for testing the existence of earnings management and it has been one of the most popular ones, it has been criticised because of the probable measurement errors in the discretionary accruals proxies. Klein (2002a) states that if there is a correlation between the measurement error in the proxy and the omitted variables, then any proxy for abnormal accruals results in biased metrics. It has also shown that firms with large cash flows or large earnings from their operations are likely to bias the discretionary accruals' estimation (Bedard, Chtourou, & Courteau, 2004). Indeed, the previous studies mostly asserted that the aggregate accruals model is a noisy earnings management proxy (Bedard et al., 2004; Davidson, Goodwin-Stewart, & Kent, 2005; Aljifri & Moustafa, 2007). Due to the difficulty of measuring discretionary accruals and Non-discretionary accruals, Aljifri and Moustafa (2007) questioned the accuracy and reliability of earnings management results.

McNichols (2000) noticed the limitations on the aggregate accruals model and suggested using a specific accruals model. According to McNichols, the researchers can apply their knowledge of the institutional arrangement for making a clear differentiation between the discretionary components and non-discretionary components in a particular

industry. They can use their GAAP (Generally Accepted Accounting Principles) knowledge to make an insight into the fundamental components that should be included in the regression. The specific accruals model can be used in the industries with a higher level of volatility; it is useful for inducing estimation error in the parameter estimates that are usually problematic in the aggregate accruals model.

However, the use of the specific accruals model requires the researcher institutional knowledge to identify the magnitude of earnings manipulation. Because of the model reliance on the discretion of the manager over the earnings, unspecified accruals management may decrease the strength of the specific accruals test for earnings management. The researchers emphasise the distribution density of managed earnings for testing earnings management (Burgstahler & Dichev, 1997; Holland & Ramsay, 2003). They mainly concentrated on the earnings behaviour around specific benchmarks or targets to observe whether managers use earnings management for meeting specific goals, such as refraining reporting losses or earnings decline (income-increasing approach).

2.3.5.2 Value Relevance

The value relevance model is used for identifying the earnings quality as an alternative attribute (e.g., Barth, Beaver, & Landsman 2001a; Nichols & Wahlen, 2004; Alkdai & Hanefah, 2012; Ogeh Fiador, 2013). Value relevance can be defined as the explanatory power of accounting information about security prices (Collins et al., 1997). Moreover, the value-relevance of accounting information is described as the ability of financial statements to summarise the information that influences the firm value (Francis & Schipper 1999; Hung, 2000). In this perspective, these researchers specified the coefficients estimated by the regression of the price or return on earnings in the price model and stock model, respectively. Their goal was to determine the relevance and

reliability of information and to indicate that the accounting information is reflected in prices when this information is relevant and reliable for investors.

In most accounting studies, earnings quality is measured by its value-relevance to shareholders concerning the valuation of equity (e.g., Leuz, Nanda, & Wysocki, 2003; Cheng, Hsieh, & Yip, 2007). According to these studies, there is a direct relationship between the earnings and market returns or stock prices. The relationship between the earnings and performance of the stock market (the explanatory power of the model or the slope coefficient) suggests the relevance and reliability of the earnings for the investors (Barth et al., 2001a; Srivastava, 2014). The earnings are generally in a higher quality when it is more value-relevant. Bao and Bao (2004) claimed that theoretically when the earnings quality is enhanced, the relationship between the firm value and the reported earnings should also be improved. If the earnings quality is diminished, the relationship between the firm value and the reported earnings should also be reduced. Previous studies investigated the impact of the changes in the accounting standards and concluded that the changes observed in value relevance models significantly influence the earnings quality. Cheng et al. (2007) investigated the impact of the selection of the accounting treatment of the transition obligation under Statement of Financial Accounting Standards (SFAS) No. 106 on the firm value. They also examined whether the earnings quality was improved following the implementation of the standard. They found that the total value relevance of both earnings and book value is not affected by the choices allowed under the new accounting standard. However, the earnings quality under the direct recognition method has been severely undermined by the one-time charge of the transition obligation. They concluded that SFAS 106 results in higher earnings quality by converting the accounting standard to the accrual basis from a cash basis.

Another group of studies has compared the value relevance of earnings under various accounting standards. For instance, Harris, Lang, and Moller (1994) compared the

relationship between the earnings reported under foreign and the US GAAP. Joos and Lang (1994) examined the influence of the different accounting measurement methods on the financial statement in some countries, including Germany, France, and the United Kingdom. They found significant differences in the valuation of the stock market and the financial ratios according to the accounting information. Under different accounting standards in 21 countries, Hung (2000) studied the impact of accrual accounting on the value relevance of financial statements. She used a sample included 17,743 firm-year observations during 1991-1997 and indicated that using accrual accounting negatively influences the value relevance of some accounting numbers, which measures firm performance (earnings and return on equity) in the countries with weak protection of shareholder. Besides, this negative effect of the accrual accounting on the value relevance of earnings was not observed in the countries that have strong shareholder protection.

2.3.5.3 Earnings Persistence

The prior studies and the accounting textbooks also defined the earnings quality in terms of sustainability and persistence (e.g., Sloan, 1996; Ahmed, Billings, & Morton, 2004; Richardson, Sloan, Soliman, & Tuna, 2005). Some researchers argued that when the earnings show sustainability, they have high quality (Revsine, Collins, & Johnson, 2002). According to the definition of earnings quality by Bodie, Kane, and Marcus (2002), the earnings quality is viewed as the expected sustainability of the reported earnings. Jonas and Blanchet (2000) affirmed that earnings persistence is mainly based on user needs. Consequently, in the view of financial reporting users, the highly persistent earnings are regarded as sustainable. That is, the earnings are more permanent and less transitory, and thus, they have higher quality (Schipper & Vincent, 2003). According to Benish and Vargus (2002), the current earnings quality is probably described as the future sustainability of the current earnings. Ayres (1994) focused on the investors' perception

of earnings quality and stated that one view of the earnings quality is associated with the general persistence of the earnings. It means that the high earnings quality indicates the earnings with high sustainability for a long time. Penman and Zhang (2002) conducted empirical research examining the collective effects of investment and accounting conservatism on earnings quality. They defined the high earnings quality to be “sustainable earnings” as in financial analysis. As explained by these researchers, when an accounting treatment produces unsustainable earnings, it implies that the earnings figures have poor quality.

In addition, as noted by Schipper and Vincent (2003), the investors always view highly persistent earnings numbers as sustainable. More persistent earnings are considered as high quality and more desirable earnings. The previous studies interpreted the relationship between the reported earnings of the firm and its stock return as a measure of earnings persistence. In other words, researchers have focused on the magnitude of the earnings-return relation and examine whether this association relates to the time-series properties of earnings. They have provided evidence that there is a relationship between the accounting earnings and the stock return’s reaction. Also, they indicated the significance of earnings persistence as a factor for explaining the return-earnings relation (Lipe, 1986; Schipper & Vincent, 2003).

Although the approach to investigate the stock return-earnings relation is viewed, some studies concentrated on the earnings response coefficient (ERC) to measure the earnings persistence and earnings quality (Lipe, 1990; Balsam et al., 2003). ERC is used for measuring the reaction of the investors to the earnings news. Here the stronger the ERC, the higher the persistence. Therefore, it shows higher earnings quality. Lipe (1990) reported that the market reaction of stock returns to each component of earnings depends on the component's persistence, where the higher persistence, the greater reaction of stock returns to typical earnings.

Sloan (1996) carried out a series of studies concerning earnings persistence. These studies decompose the earnings into two constituents; accruals and cash flows. He analysed the information characteristics (about future earnings) available in two constituents of current earnings and studied this information to what extent is reflected in the share prices. As argued by Sloan (1996), the accrual and cash components of earnings are both relevant to financial statement users. However, the accrual component has less reliability and, therefore, less persistence than the cash flow constituent. It implies a negative relationship between the magnitude of the accrual constituent and the persistence of current earnings, and hence, earnings quality.

The different persistence levels in the accrual and cash flows constituents of earnings, which was found by Sloan (1996), encouraged the subsequent studies to have a more in-depth investigation of the accruals implication for earnings quality (Zheng, 2003). For instance, Johnson, Khurana, and Reynolds (2002) have modified the Sloan (1996) model and proposed a cross-sectional model for investigating the audit tenure effect on the accruals persistence.

2.3.5.4 Conservatism

Conservatism in Statements of Financial Accounting Concepts (SFAC) No.2 is defined as a cautious reaction against the uncertainty. It is also an attempt to ensure that uncertainty and risks inherent in business situations are adequately considered. Under conservative accounting, the losses or expenses are immediately recognised. In contrast, the gains or revenues cannot be immediately recognised until uncertainties surrounding economic events are resolved. For instance, the conservatism means using the lower cost or market value in valuing inventories.

Moreover, the conservatism pursues this rule that accrued net losses should be recognised on the firm purchase commitments for goods in inventory. Similar to SFAC

No.2, International Financial Reporting Standards (IFRS) utilise prudence as the concept of conservatism (Grambovas, Giner, & Christodoulou 2006). As stated in paragraph 37, IASB Framework: “prudence means being cautious in the judgments about the estimates under the uncertainty conditions so that the income or assets are not overstated, and liabilities or expenses are not understated.” Imhoff and Thomas (1989) argued that there is a close relationship between higher quality and conservative accounting approaches and complete financial disclosure. Conservatism is defined by Basu (1997) as attracting the accountants’ tendency to require a higher verification level for recognising good news than bad news in the financial statements. Ball, Kothari, and Robin (2000) asserted the conservatism as a characteristic of the accounting income, which holds the transparency of the financial statement since the timely recognition of an economic loss in accounting income forces managers to remove the losses more quickly and reduces investment risk for the investors.

Subsequently, conservatism has a CG role through monitoring management, debt, and other contracts. Conservative accounting income demands higher verifiability of economic income recognition in comparison with that of economic losses (Watts, 2003a). Higher verifiability of revenues related to the expenses is required for the higher level of conservatism in the earnings calculation. It decreases the opportunistic behaviour of the management in reporting higher earnings for the sake of their interest. Moreover, higher levels of conservatism in the earnings calculation reduces the probability that earnings will omit parallel economic losses, thereby lowering investors’ potential losses due to flawed earnings information. LaFond and Watts (2008) examined the conservatism and information asymmetry. Their finding indicated that conservatism causes a reduction in the manager’s incentives and capacity for manipulation of the accounting numbers. It also decreases the information asymmetry and the deadweight losses originating from the information asymmetry, thereby increasing firm and equity values. Therefore,

conservatism decreases the opportunistic behaviours of management in increasing (reducing) the income (losses) and thus improves earnings quality.

2.3.5.5 Timeliness

The earnings timeliness is usually considered as a feature of high-quality financial reporting. The users perceive timely reporting as associated with a higher accounting quality. Since the users can use the information for the evaluation and valuation, it can be stated that timelier information (including earnings) is more relevant and thus more useful for financial statements users (Abdullah, 2006). Accordingly, some studies utilise timeliness as one of the characteristics of earnings quality. Francis et al. (2004) investigated the relationship between equity cost and earnings quality. They reported that seven attributes, one of which is timeliness, represent the quality of earnings.

The factors related to the timeliness of earnings have been examined in some studies. The researchers studied the association between mechanisms of governance and some proxies for earnings timeliness (Bushman, Chen, Engel, & Smith, 2004). They observed that there is a positive relationship between timeliness and the proportion of the directors on the board. Abdullah (2006) examined the effects of the board of directors' composition, audit committee's composition, and the role separation for the chair of the board and the CEO on the timeliness of reporting in Malaysia. He observed a significant association between the board independence and the role separation for board chair and CEO and more-timely reporting. Abdullah (2006) also indicated that the 1997 financial crisis had adversely affected the timeliness of reporting, implying that during difficult periods, firms spend more time to prepare the audited financial reports.

Beekes, Pope, and Young (2004) defined timeliness as the duration of the time taken for reflecting information in the earnings. According to Raonic, McLeay, and Asimakopoulos (2004, p. 120):

“If the reported earnings reflect completely the information incorporated in the market in the pricing of the equity of the firm, then it can be claimed that the reported earnings are timely. If the changes in the value, identified by the market in the present period, are not included in the accounting calculations and are deferred to the future, then the earnings are less timely.”

2.3.5.6 Variability/Smoothness

The absence of variability is related to smoothness and sometimes associated with high-quality earnings. Schipper and Vincent (2003) reported that researchers use other methods for the assessment of earnings quality. For instance, they may test management engagement in smoothing activities. Ayres (1994) defined the income smoothing activities as the effort to report a stable or rise in the earnings when the managers believe that smooth earnings are more highly valued, decrease the possible debt risk and dividend covenant violation, and increase the bonuses awarded to the management.

Leuz et al. (2003) studied the earnings management in 31 countries and used two measurement methods of smoothing interventions. These measures included the ratio of the standard deviation of operating earnings to the standard deviation of operating cash flows and the correlation between changes in accruals and changes in cash flows. They found that the lower ratios are perceived as higher income-smoothing activities. At the same time, the presence of a negative relationship between the variation of the accruals and the variation of operating cash flows indicate income-smoothing activities. Nevertheless, there are weaknesses associated with variability or smoothness as a measure of earnings quality. One of the weaknesses is that the model is not able to show the faithfulness of the reporting business model and economic environment (Schipper & Vincent, 2003). Smoothness may happen due to the intervention in the financial reporting process by the management. It is assumed that the smoothed or managed earnings are less informative and hence have lower quality (Leuz et al., 2003). Moreover, smoothness may cause the perception that earnings are manipulated. Then, investors perceive that

managers are not reporting earnings fairly. As a consequence, it leads to lower market values and potential future problems in the capital markets (Ayres, 1994).

2.3.6 Qualitative Characteristics of Financial Accounting Information based on IASB/FASB's Conceptual Framework (2010)

Earnings quality attributes used in this study are relevance and faithful representation (previously defined as reliability) as two fundamental qualitative characteristics of earnings based on FASB/IASB's conceptual framework in 2010. There is little research that has been conducted in this area to address the relevance and or faithful representation (reliability).

Among the research, Barua (2006), in his dissertation, developed a measure of earnings quality in line with the primary qualitative characteristics specified in the statement of financial accounting concepts (FASB, SFAC, No.2, 1980). He measured earnings quality by using FASB's qualitative characteristics, reported that high-quality earnings help investors make their investment decisions effectively, and provides useful accounting information for decision-makers. Previous studies, especially Francis et al. (2004), do not depict a complete story about the earnings quality, while Barua (2006) developed a measure of earnings quality that includes various components of both attributes of earnings quality; reliability and relevance. He measured predictive value of earnings by four models namely, a) the ability of current earnings to predict future earnings, b) the ability of current earnings to predict future operating cash flows, c) the ability of the components of the current earnings to predict future earnings, d) the ability of the components of the current earnings to predict future operating cash flows. The measurement of feedback value addressed by Barua (2006) is explained more in Section 2.3.6.3. Barua (2006) also measured the faithful representation of earnings (as an attribute of reliability defined by FASB in 1989) by using the accrual model.

Similarly, some other scholars have studied the fundamental qualitative characteristics of accounting information. They have utilised both relevance and faithful representation (previously was reliability) as proxies for earnings quality in their studies (Velury & Jenkins, 2006; Bandyopadhyay, Chen, Huang, & Jha, 2010; Krismiaji et al., 2016). Velury and Jenkins (2006) examined the relationship between current earnings and year-ahead operating cash flows to investigate whether earnings have predictive value or feedback value. They also used the magnitude of abnormal accruals, as measured by the Modified Jones Model, to proxy for the neutrality of earnings (as a component of faithful representation). Bandyopadhyay et al. (2010) applied current operating cash flows (OCF) to predict future cash flows and future earnings by two different models to assess the relevance and reliability of earnings, respectively. In the study conducted by Krismiaji et al. (2016), relevance is measured by predictive value (current earnings-future earnings relation). In contrast, faithful representation is measured by absolute discretionary accrual as an inverse measure of neutrality.

Some other studies have addressed the predictive ability of earnings as a component of relevance (an attribute of earnings). For example, Eng, Najar, & Chng (2005), Kim and Kross (2005), Al-Dhamari and Ku Ismaili (2013), and Mollah et al. (2019) defined the predictive value of earnings by the ability of current earnings to predict future cash flow. The predictive notion of future cash flow is consistent with the definition of relevance in SFAC No. 2 (paragraph 57), namely, the prediction of outcomes. Mashayekhi & Bazaz (2010) measure earnings predictability using the square root of the error variance from a model of current earnings-future earnings relation. Mahmud et al., (2009) addressed a model in which future earnings ($EARN_{i,t+1}$) are regressed on the components of current earnings that are cash flows from operation ($OCF_{i,t}$) and total accruals ($TAC_{i,t}$). The absolute of the prediction error ($\epsilon_{i,t}$) from this model is used as

the measure of predictive ability of current earnings. Other studies used timeliness as a component of relevance (Ahmad & Kamarudin, 2003; Ku Ismail & Chandler, 2004).

Moreover, some studies have used reliability as a proxy for earnings quality. They measured reliability by the ability of current earnings to predict future earnings (Dechow et al., 1995; Dechow & Dichev, 2002; Chung et al., 2002; Francis et al., 2004; Aboody, Hughes, & Liu, 2005; Richardson et al., 2005; Jenkins et al., 2006; Ball & Shivakumar, 2008).

The measurement methods of previous studies to operationalise these characteristics do not seem to be completely consistent with FASB/IASB's definition in 2010. Consequently, this study attempts to measure earnings quality according to the concept of relevance and faithful representation prescribed by IASB/FASB's conceptual framework (2010) when the relationship between CG and earnings quality is explored.

2.3.6.1 Definition of FASB/IASB's Conceptual Framework

This Statement of Financial Accounting Concepts (Concepts Statement) is one of a group of publications in the Board's Conceptual Framework for Financial Accounting and Reporting (FASB/IASB's Conceptual Framework, 2010).

As stated by FASB/IASB's conceptual framework 2010, "the conceptual framework provides a coherent set of the interrelated objectives and fundamental concepts prescribing the function, nature, and boundaries of financial accounting and reporting. It is expected that it can provide consistent guidance. It is intended to serve the public interest through presenting structure and direction for the financial accounting and reporting to facilitate the provision of information free from bias. Such information assists the capital and other markets in performing effectively in allocating resources in the society and economy."

2.3.6.2 History of FASB/IASB's Conceptual Framework

Some of the characteristics of the last decades are the development of the world's financial markets, the globalisation of the businesses, and the economic and financial crisis that is present yet. Therefore, qualitative and adequate accounting information is more required because they are significant determinants of economic efficiency. Inconsistencies, gaps and contradictions, and its immobility are some inappropriate characteristics of the 1989 Framework in such economic circumstances. They have caused its revision and so the foundation of the 2010 Framework (Lalević Filipović, 2012).

Changes of objectives and primarily established qualitative characteristics of financial reporting are intended to increase confidence and reliability in financial reporting and reduce the opportunity for their misuse. Therefore, the system of financial markets is indirectly strengthened. In this regard, the FASB declares that the highlighted changes, specifically regarding the quality of financial statements, affect the higher information content for investors, creditors, and other users, so that they would be able to make business decisions more effectively (Lalević Filipović, 2012).

In 2004, the FASB and IASB jointed in a project to begin as an addition to their original Norwalk Agreement. The FASB/IASB's initial issuance of a discussion paper in 2006 and an exposure draft two years later (May 2008) were significant steps in the pursuit of a single and common conceptual framework. Regarding this matter, on 29 September 2008, the Malaysian Accounting Standards Board (MASB) announced its support for the joint effort of IASB and FASB in advancing a sound Conceptual Framework that provided a qualified basis for developing future accounting standards. Finally, in September 2010, the IASB/FASB issued Concepts Statement No. 8, Conceptual Framework for Financial Reporting, replacing, some 30 years after their adoption, SFACs No. 1 and No. 2. It completed phase one (1) of the eight (8) phase plan

to converge their respective conceptual frameworks. This concept (Statement No.8), which consists of two chapters of that new conceptual framework, repeals FASB Concepts Statements No.1 (Objectives of Financial Reporting by Business Enterprises) and No.2 (Qualitative Characteristics of Accounting Information) (FASB/IASB Conceptual Framework, 2010).

The FASB and IASB have stated that the primary decision-specific qualities of accounting information are relevance and faithful representation. They are regarded in setting standards for financial reporting (FASB/IASB 2010). The joint FASB/IASB Conceptual Framework Project was motivated by necessity in making accounting information useful for users.

They note that “information must be both relevant and faithfully represented if it is to be useful. Neither a faithful representation of an irrelevant phenomenon nor an unfaithful representation of a relevant phenomenon, helps users make good decisions” (FASB, 2010). Their comments imply that an unreliable measure of a highly relevant phenomenon does not diminish the relevance of the phenomenon to the decision, but reduces the decision usefulness of the information (Kadous, Koonce, & Thayer, 2012).

A three-step process is recommended by the FASB: (1) identifying the economic phenomenon, (2) determining the most relevant information and that it can be faithfully represented, and (3) determining the availability of the information and that it can be faithfully represented. Based on SFAC No 2’s hierarchy, verifiability was closely associated with representational faithfulness. However, it is now one of four enhancing qualitative characteristics. The new framework categorises the comparability, timeliness, verifiability, and understandability as enhancing qualitative characteristics (Figure 2.5). This result simplifies the framework while improving the usefulness of information that is relevant and faithfully represented (Kaminski & Carpenter, 2011; Cohen & Karatzimas, 2017). Relevance continues to be one of the two fundamental qualitative characteristics

of useful information; however, “faithful representation” replaces “reliability” as the second.

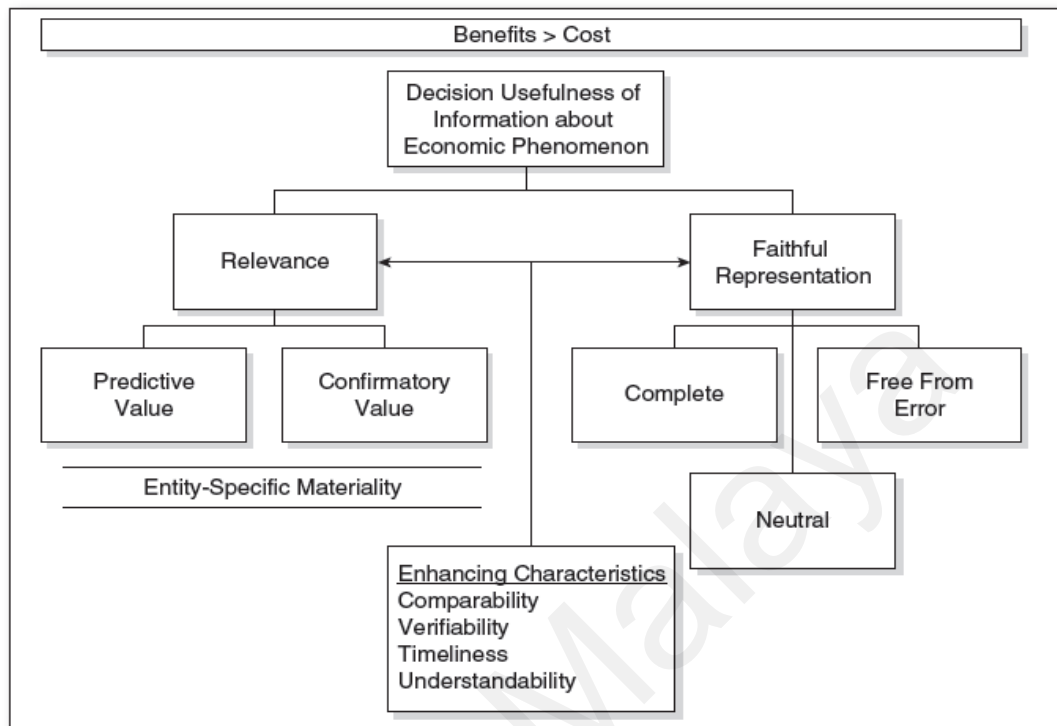


Figure 2.5: Financial Accounting Standards Board (FASB), Statement of Financial Accounting Concepts (SFAC) No.8 September 2010.

2.3.6.3 Primary Qualitative Characteristics

(a) *Relevance*

As noted in FASB (2010), “relevant financial information can make a difference in the users’ decision even if some users do not want to use the benefits of this information or already know about it from other information sources.” The FASB (2010) stated many decisions by investors, lenders, and other creditors are based on implicit or explicit predictions about the amount and timing of the return on an equity investment, loan, or another credit instrument. Consequently, information is capable of making a difference in one of those decisions only if it will help users to make new predictions, approve, or correct the prior predictions, or both. It is the definition of predictive value (PV) or confirmatory value (feedback value; FV). In other words, financial information has the

capability of making a difference in decisions if it has predictive value, confirmatory value, or both.

Financial information has predictive value if it can be used as an input to processes employed by users to predict future outcomes. There is no need for financial information to be a prediction or forecast to have predictive value. The users use financial information with predictive value for making their own predictions. Financial information has confirmatory value if it provides feedback (confirms or changes) about previous evaluations. There is an interrelation between the predictive value and confirmatory value of financial information. The information with predictive value often has a confirmatory value (FASB 2010).

i Predictive Value of Earnings

Predictive value is related to the relevance in that “information can make a difference to decisions by improving decision-makers’ ability to predict.” The predictive value of earnings means the ability of the current earnings to predict future earnings and future cash flows. Predictability of earnings is important for the relevance because it can influence decisions by forming expectations about future earnings that are correlated with future cash flows. As specified by the SFAC No.8, prediction of the timing, amount, and uncertainty of future cash flows is regarded as one of the main objectives of accounting earnings (FASB, 2010).

A firm's ability to generate cash flow affects the values of its securities. Therefore, the FASB/IASB shows that one of the primary objectives of financial reporting is providing information to help the shareholders, creditors, and other stakeholders evaluate the timing and amount of prospective cash flows.

Moreover, the FASB affirms that compared to current cash flows, information about current earnings and its components generally has more ability to predict future cash

flows. Several prior studies examine the abilities of current earnings and current cash flows to predict future cash flows as a measure of earnings quality (Barth, Cram, & Nelson, 2001b; Eng et al., 2005; Barua, 2006; Velury & Jenkins, 2006; Atwood, Drake, & Myers; 2010; Ye, Zhang, & Rezaee, 2010; Bandyopadhyay et al., 2010; Al-Dhamari & Ku Ismail, 2013; Dichev et al. 2013; Schiemann & Guenther, 2013; Mollah et al., 2019).

Thus, to measure the predictive ability of earnings as a component of relevance, the authors mentioned above have used cash flows prediction models in their studies as follows. It also means current earnings-future cash flows relation.

$$OCF_{i,t+1} = \alpha_0 + \alpha_1 EARN_{i,t} + e_t$$

Where,

1. $OCF_{i,t+1}$: Future Cash flow from the operation of firm i (scaled by average total assets) at the end of year t+1
2. $EARN_{i,t}$: Operating income before extraordinary item and discontinued operations scaled by average total assets
3. e_t : Error term.
4. Both OCF_{t+1} and E_t are deflated by average total assets for year t.

ii **Feedback Value of Earnings**

In addition to predictive value, confirmatory value (feedback value) contributes to the relevance of financial reporting information. Confirmatory value is essentially a feedback value that confirms or refutes prior judgments related to the information. According to SFAC No. 8, feedback value refers to the ability of information to influence decisions by confirming or correcting earlier expectations of decision-makers (FASB, 2010).

Decisions are rarely made separately. Information on the outcome of a decision is often a key input in the latter decision-making. This information is often considered useful information in the evaluation. Information should be provided in a way to be useful in the

comparison of past events with previous expectations and its confirmation or modification. The information which is obtained from the consequences of a decision, rarely remain unused and can be used to improve and control future decision-makings (Barua, 2006).

Velury and Jenkins (2006) state that the predictive value and feedback value go hand in hand. They have utilised both attributes in one model to evaluate the relevance of earnings. However, pursuant Barua (2006), Mahmud et al. (2009) and Mehri et al. (2013), this study measures feedback value separately. It is called cash flow prediction model, which shows the ability of current earnings to change predictions about future cash flows.

The feedback value is measured by the difference between the absolute prediction error of next year's cash flow *after* considering the current year's earnings ($PEA_{i,t+1}$) and the absolute prediction error of next year's cash flow *before* considering current earnings ($PEB_{i,t+1}$). If the former ($PEA_{i,t+1}$) is small, it indicates positive feedback value which leads to high earnings quality. On the other hand, if the ($PEA_{i,t+1}$) is large, it shows a negative feedback value indicating low earnings quality.

The following models are used to measure the feedback value of earnings.

(1) Cash Flows Prediction Model: $OCF_{i,t+1} = \alpha_0 + \alpha_1 EARN_{i,t} + e_{i,t}$

(2) Earnings Prediction Model: $EARN_{i,t+1} = \beta_0 + \beta_1 EARN_{i,t} + e_{i,t}$

Three steps are involved in estimating the feedback value of earnings:

Step 1: The first step is to estimate the prediction error of firm i in year $t+1$ based on actual earnings of year t ($PEA_{i,t+1}$). This estimation implies the prediction error of next year's cash flow after considering the current year's earnings. To obtain an estimate of $PEA_{i,t+1}$, this study derives α_0 and α_1 from equation (1). Then, to calculate predicted operating cash flows ($POCF_{i,t+1}$), this study runs regressions with observations for firm i over a period up to year t . Finally, prediction error ($PErrorA_{i,t+1}$) is estimated by the

difference between actual operating cash flows and predicted operating cash flows for year t+1.

$$POCF_{i,t+1} = \alpha_0 + \alpha_1 EARN_{i,t}$$

$$PErrorA_{i,t+1} = OCF_{i,t+1} - POCF_{i,t+1}$$

Where,

$POCF_{i,t+1}$ = Predicted OCF for year t+1 by using time-series data through year t

$PErrorA_{i,t+1}$ = Prediction error for year t+1 using time-series data through year t.

Step 2: The next step is to estimate the prediction error of next year's cash flow before considering the current year's earnings ($PEB_{i,t+1}$). To obtain an estimate of the prediction error of firm i in year $t+1$ based on actual earnings of year $t-1$ ($PEB_{i,t+1}$), this study, first, derives β_0 and β_1 from equation (2). Then, to calculate predicted earnings for year t ($PEARN_{i,t}$), this study runs regressions with observations for firm i over a period up to year t-1. After that, this study uses α_0 and α_1 from equation (1) to estimate predicted operating cash flows ($POCF_B_{i,t+1}$) in regression with observations for firm i over a period up to year t. Finally, prediction error ($PErrorB_{i,t+1}$) is estimated by the difference between actual operating cash flows and predicted operating cash flows for year t+1.

$$PEARN_{i,t} = \beta_0 + \beta_1 EARN_{i,t-1}$$

$$POCF_B_{i,t+1} = \alpha_0 + \alpha_1 PEARN_{i,t}$$

$$PErrorB_{i,t+1} = OCF_{i,t+1} - POCF_B_{i,t+1}$$

Where,

$PEARN_{i,t}$ = Predicted EARN for year t by using time-series data through year t-1

$POCF_B_{i,t+1}$ = Predicted OCF for year t+1 based on predicted EARN of year t

$PErrorB_{i,t+1}$ = Prediction error for year t+1t using time-series data through year t-1.

Step 3: Finally, the feedback value of earnings is calculated as the difference between $PEA_{i,t+1}$ and $PEB_{i,t+1}$. Thus the following model is used to measure the feedback value of earnings.

$$i. \quad FV_{i,t} = PEB_{i,t+1} - PEA_{i,t+1}$$

Where;

$FV_{i,t}$ Feedback value of earnings of firm i in year t

$PEB_{i,t+1}$ Prediction error of next year's earnings without considering current earnings of firm i in year $t+1$

$PEA_{i,t+1}$ Prediction error of next year's earnings after considering current earnings of firm i in year $t+1$

Moreover, Barua (2006) measures feedback value by using a similar method, as described above. The only difference is the prediction model. He uses the following earnings prediction model, as described in the previous section.

$$EARN_{t+1} = \alpha_0 + \alpha_1 EARN_t + e_t$$

(b) **Representational Faithfulness**

Financial reports represent economic phenomena in words and numbers. To be useful, financial information not only must represent relevant phenomena, but it also must faithfully represent the phenomena that it purports to represent. SFAC No.8 (2010) used the term faithful representation to describe what is before called reliability. Because attempts to explain what reliability was intended to mean have proven unsuccessful, the Board searched for a different term for conveying the intended meaning more clearly. As a result, the term faithful representation, the faithful depiction of the economic

phenomena in financial reports, was created. This term covers the main characteristics included in the previous frameworks as the dimensions of the reliability (FASB, 2010).

Faithful representation addresses how well that economic construct, or phenomenon, is depicted or measured (e.g., fair value based on a market transaction versus a model). A depiction would have three characteristics to be a perfectly faithful representation. It would be neutral, complete, and free from error (FASB, 2010). A complete representation encompasses all information that a user needs for understanding the phenomenon, including all necessary explanations and descriptions. In some cases, a perfect depiction may require statements of the crucial facts concerning the nature and quality of the items, factors, and circumstances that might influence their quality and nature, and the process utilised to determine the numerical depiction. A neutral representation means it is free from the bias in selecting or presenting the financial information. A neutral depiction is not slanted, weighted, emphasised, deemphasised, or otherwise manipulated to increase the probability that financial information will be received favourably or unfavourably by users. Neutral information does not mean information with no purpose or no impact on behaviour.

Neutrality means the absence of biased reported information which intends to attain a pre-specified result or to induce a particular behaviour (SFAC No. 2). If the managers faithfully report the earnings, then the earnings number would be free from the bias (i.e., neutral).

The relationship between earnings management and the information content of accounting earnings is based on the argument that the less reliable earnings are less informative. As indicated by the empirical findings, earnings management includes the information that is useful for the shareholders in their assessment of faithful representation. The firms with less engagement in earnings management probably provide accounting earnings with higher reliability (Krishmiaji et al., 2016).

Prior studies have examined earnings management by the magnitude of abnormal accruals. Larger (smaller) abnormal accruals propose more (less) earnings management (Niu, 2006; Velury & Jenkins, 2006; Jiang et al., 2008; Dimitropoulos & Asteriou, 2010; Johl et al., 2013; Mudah et al., 2018; Habbash, 2019). These studies use the magnitude of abnormal accruals, as measured by the Modified Jones Model (Dechow et al., 1995) described below, to investigate earnings management. The following cross-sectional model is used to generate coefficient estimates for each group of firms with the same two-digit SIC code and calendar year. This model is the estimation of normal accruals.

$$TA_{i,t}/A_{i,t-1} = \left[\alpha_i \left(1/A_{i,t-1} \right) + \beta_{1i} \left(\Delta REV_{i,t}/A_{i,t-1} \right) + \beta_{2i} \left(PPE_{i,t}/A_{i,t-1} \right) \right] + \varepsilon_{i,t}$$

Where for sample firm I at time t:

$TA_{i,t}$ Total accruals, defined as net income before extraordinary items less operating cash flows

$A_{i,t-1}$ Total assets at time t-1

$\Delta REV_{i,t}$ Change in revenue from year t-1 to year t

$PPE_{i,t}$ Gross property plant and equipment

$\varepsilon_{i,t}$ Error term

The coefficient estimates generated by the above model are used in the following model to generate expected accruals. Thus, expected accruals for firm i at time t are calculated as:

$$E(TA_{i,t}/A_{i,t-1}) = \left[a_i \left(1/A_{i,t-1} \right) + b_{1i} \left((\Delta REV_{i,t} - \Delta REC_{i,t})/A_{i,t-1} \right) + b_{2i} \left(PPE_{i,t}/A_{i,t-1} \right) \right] + \varepsilon_{i,t}$$

Where:

$E(TA_{i,t}/A_{i,t-1})$ Expected total accruals scaled by total asset for year t-1.

$\Delta REC_{i,t}$ Change in receiveable account from year t-1 to year t

The difference between actual accruals and expected accruals is attributed to abnormal accruals. The absolute value of abnormal accruals (ABNAC) is used as a measure of earnings management.

$$\text{ABNAC} = \text{Actual accruals} - \text{Expected accruals}$$

2.4 Summary of the Chapter

This chapter has reviewed previous studies concerning the CG concept and the history of CG in the world and Malaysia. CG is the mechanism by which companies are controlled and directed. It enables finance's suppliers to ensure that they will obtain a return on their investment (Cadbury Committee, 1992; Shleifer & Vishny, 1997). Because the literature consists of several definitions to elaborate on the meaning of CG from different understandings and aspects, this chapter defined CG from two perspectives. In the following, different functions and components of CG were described. Previous literature mostly discussed the impact of each corporate governance mechanism on the FRQ separately. This study has found little or no research that integrates two corporate governance mechanisms in one framework. In other words, few scholars drew attention to the interaction effect among corporate governance mechanisms. Thus, this study addresses six pairs of four main corporate governance mechanisms in the study of the relationship between CG and earnings quality and explains how the interaction of some corporate governance mechanisms influence the earnings quality.

Concerning the objective of this thesis, FRQ was described by the details in this chapter. Notably, the quality of earnings was defined based on the primary qualitative characteristics of accounting information identified by FASB/IASB (2010), such as the relevance and faithful representation.

CHAPTER 3: THEORETICAL FRAMEWORK AND DEVELOPMENT OF HYPOTHESES

3.1 Introduction

This chapter presents the theoretical framework of the thesis. The agency theory and resource dependence theory (RDT) are the fundamental theories applied in this study to investigate the effect of corporate governance characteristics on financial reporting quality (FRQ). Finally, this study develops hypotheses based on the gap in the literature concerning the association between corporate governance mechanisms and earnings quality. The organisation of this chapter is as follows: Section 3.2 describes the theoretical fundamentals. Section 3.3 discusses the relationship between CG and FRQ. In Section 3.4, this study summarises the discussions in this chapter.

3.2 Theoretical Fundamentals

3.2.1 Agency Theory

The agency theory was the dominant theory for a long time in corporate governance (CG) field. This theory presupposes that the main challenges in governance are the moral threat caused by the separation ownership from control. It assumes that the agents of the firm will pursue their own self-interest in the absence of external monitoring and incentive management systems (Judge, 2012).

According to this theory, the governance role is the mitigation of the agency conflicts occurring between the agents and principal. It is regarded as the cornerstone theory for CG research (Jensen & Meckling, 1976). Study in this tradition often emphasises formal incentives and control mechanisms aimed at protecting outside dispersed shareholders from the opportunistic and individualist managers. An example of a control mechanism is producing external financial reports allowing outside shareholders to evaluate management performance. However, managers have incentives to mislead shareholders by providing financial information that does not reflect the real performance of the

business (Healy & Wahlen, 1999). Hence, there are different internal and external governance mechanisms aiming at protecting the minority shareholders against the opportunistic reporting behaviour of the management.

Agency theory considers the managers as the opportunistic individuals that need to be controlled if their actions are to be aligned with the interests of shareholders. As per the agency paradigm, CG through the corporate board is a crucial way of controlling opportunistic behaviour of management (Keenan, 2004).

The core of agency theory is the agency relationship, which refers to “the contracts, that under these contracts, some principals involve another agent for conducting the service on their behalf. It delegates the authority of the decision-making to the agent” (Jensen & Meckling, 1976). Specifically, the shareholders invest funds for productive use and then engage the managers to generate a return on the funds in the company. Thus, the relationship between managers and investors is coordinated by a contract to determine managers’ rights and return’s allocation within the firm. The essence of agency theory rests upon resolving two problems, which arise from agency relationships.

The first is the agency problem arising when (a) there is a contradiction between the objectives of the principal and agent, and (b) it is not easy for the principal to realise what the agent is really doing. The second problem is the risk-sharing which derives from different attitudes toward risk between principals and agents and causes the principals and agents to choose different behaviours because of varying risk preferences (Eisenberg et al., 1998; Eisenhardt, 1989). Therefore, agency theory highlights how the principals can set monitoring mechanisms to affect the behaviour of agents. In this regard, Eisenhardt (1989) states: “The agency theory generally contains the relationships reflecting the fundamental agency structure of an agent and a principal who is involved in corporative behaviour. However, they have different objectives and attitudes toward risk”.

Concerning this theory, board size is one of the factors affecting the effectiveness of the monitoring tasks of the board. Mangena and Tauringana (2008) indicated that large boards offer effective oversight in uncertain economic and political periods to decrease agency problems. Haniffa and Hudaib (2006) also concluded that due to the more extensive knowledge level available on larger boards, better business decisions could be made to decrease the agency problem. According to Fama and Jensen (1983a) and Brickley, Coles, and Terry (1994), board independence causes a reduction in agency cost and expropriation. It improves the effectiveness of monitoring, leading to the improvement of financial reporting quality. Agency theory also proposes that non-executive directors play an essential role in monitoring and supervising executives. Non-executive directors are independent and care for their reputations (Fama & Jensen, 1983a). It is expected to restrain the self-serving managerial behaviour and to accordingly ensure the reporting earnings numbers of high quality (Al-Dhamari & Ku Ismail, 2013). Accordingly, Anderson, Gillan, and Deli (2003) and Firth, Fung, and Rui (2007), and Gul and Lai (2002) provided empirical evidence indicating that the quality of the reported earnings deteriorates as the two roles of chairperson and CEO are combined.

Moreover, agency theory recommends separating the chairman and CEO from the same position because the primary considerations of the chairman include remunerating the CEO and overseeing the board; therefore, if these two roles are combined, it may increase the agency problems by weakening the effectiveness of monitoring the CEO (Jensen, 1993). Board activity which is measured by the frequency of board meeting is also an essential dimension in line with agency theory (Vafeas, 1999). Consistent with the agency theory, Mashayekhi and Bazaz (2010) reported that the boards that meet more frequently would have a significant positive association with the earnings quality of the firm, which is evaluated by the earnings predictability and persistence. According to their

findings, it can be stated that the higher frequency of the board meetings may result in a more-effective discussion between directors on the boards.

Regarding the audit committee, in terms of agency theory, a larger audit committee may provide more oversight over the financial reporting process. Such oversight seems to improve earnings quality by reducing the probability of restating financial statements after their original filings with the Securities and Exchange Commission (SEC, 1999) (Lin, Li, & Yang, 2006). Moreover, based on the same theory, there is an argument, which states that by reducing conflicts of interest between managers and ownership, independent directors in audit committee would result in higher FRQ (Chandar, Chang, & Zheng, 2012). Moreover, independent non-executive members serving in an audit committee are more likely to behave in a way that retains shareholders' interests (Sori, Hamid, Nasir, Yusoff, Hashim, Said, & Daud, 2008). The results of prior research suggest those audit committees whose members are competent and qualified and have regular meetings are also assumed to be more active in internal controls and supervising the financial reporting process (Blue Ribbon Committee, 1999). In this regard, Menon and Williams (1994) state that when audit committees have frequent meetings, they might have more information and knowledge about the issues of current accounting and auditing and have more activity in performing their responsibilities. There is also some evidence that frequent audit committee meetings are related to less restatement (Abbott et al., 2004) and fraud (Beasley et al., 2000).

This theory postulates that the agents might not act to maximise the profits of principals and that the principals have limited ability to monitor whether or not their interests are appropriately served by the agents (Jensen & Meckling, 1976). Hence, the company should have a higher investment in the internal audit function (IAF) for decreasing the agency costs between the managers and investors (Adams, 1994). The same theory explains the requirement of the independent responsibilities attributed to the

internal audit function (Adams, 1994). In practice, the agency theory argues that internal auditing is helpful for the achievement of the cost-efficient contracting between the managers and owners.

Likewise, this theory postulates that external auditors act as a control tool to eliminate or at least provide a signal on opportunistic practices or fraud committed by management as earnings management (Jensen & Meckling, 1976; Watts & Zimmerman, 1986). Moreover, external auditors audit the financial statements and lend credibility to published financial statements. They provide reasonable assurance that investors are receiving relevant, useful, transparent, and reliable financial information in making sound business decisions. Agency theory suggests that in the absence of regulation, the tendency of firms' demand for independent audit is a function of the extent of the separation between ownership and control (Rezaee, 2004). Fan and Wong (2005) also support this statement and claim that external auditors have a monitoring responsibility to reduce agency problems. While the internal audit independence assures the board, through the audit committee, the independent external auditors assure the shareholders on the financial statements' quality. Moreover, the firm may pay a higher fee to the external auditors to lower the agency costs exist between the investors and managers (Rezaee, 2004).

3.2.2 Resource Dependence Theory

The current work supports the idea that another theory beside the agency theory is required for explaining the role of CG mechanisms on FRQ. In this regard, some works on CG have used the resource dependence theory (RDT) (Menon & Williams, 1994; Rager, 2004). The agency theory's assumptions about individualistic motivation, which cause the divergence in the principal-agent interests, may not be valid for all executives (Davis, Schoorman, & Donaldson, 1997). Additionally, Nicholson and Kiel (2007)

showed that merely high monitoring does not secure the corporate performance, even though many types of research confirm that monitoring role of some corporate governance characteristics contributes towards the integrity of financial reporting (see Chapter 2). Thus, RDT is regarded as an alternative theory to support this research.

Based on the RDT, the structure of the board reflects the firm's operating environment (Pfeffer, 1972; Boyd, 1990). Companies must select the directors based on their ability in facilitating the access to required resources. That is, when someone is appointed to a board by an organisation, the person is expected to support the organisation, to be concerned about the organisation's problems, to present it favourably to others, to attempt to help the organisation (Pfeffer & Salancik, 2003). It is believed that such assistance improves the firm performance, and raises the returns to the investors. The findings of the same study indicated that board size and type of outside director and the board's expertise are associated with the organisation's demand for capital and the level of regulation in the organisational environment.

The RDT asserts that the CG structures, for example, the board of directors, influence the access to the resources that are fundamental to the company's performance (Pfeffer, 1972). RDT especially prefers the boards that have a high composition of non-executive directors (NEDs) because they can provide more extensive knowledge and expertise. They also can offer enhanced networking with the outside environment and an improved reputation (Haniffa & Cooke, 2002; Haniffa & Hudaib, 2006). Thus, NEDs improve networking with external stakeholders (customers, other companies, governments, creditors, suppliers, and buyers). Therefore, they can facilitate access to the business and political contacts, information and capital (Nicholson & Kiel, 2007). Hence, NEDs enhance access to the resources (Nicholson & Kiel, 2007), enabling less expensive access to inputs. As a result, the company's performance is positively influenced.

It is consistent with the assumptions of the RDT that larger boards provide better access to the external environment of their firm, leading to facilitation and securing the vital resources. They are also viewed as a source of having board members with expertise and experience, especially those who are independent and can provide environmental links (Pearce & Zahra, 1991). Studies on the FRQ have concluded that managers of the companies with larger boards are less expected to involve in an opportunistic behaviour of earnings management that may deteriorate the quality of earnings numbers into interested parties (Chtourou et al., 2001; Bradbury et al., 2006; Wan Ismail, Dunstan & Van Zijl, 2010). Besides, according to the RDT, the board is regarded as a fundamental assistant of the firm. The directors should contact external linkages to have more resources to improve firm success. To improve the success of the firm, directors must satisfy this role by counsel or representation with other institutions (Pfeffer & Salancik, 2003). Pfeffer (1972) and Pfeffer and Salancik (2003) believed that the board size diversity and the outside directors' background are two factors in managing the company needs for any capital in the future or managing environment contingency.

Considering the audit committee characteristics, Wan Ismail et al. (2010) provided evidence indicating that the size of the audit committee has a positive relationship with earnings quality. They asserted that a larger audit committee enjoys more capabilities and resources, and hence performs the duties better. These findings are consistent with the RDT. The theory expresses that as the size of the audit committee increases, the effectiveness of the committee also increases because it has more resources in handling issues faced by the company (Pearce & Zahra, 1992; Abbott et al., 2004). The relationship between audit committee independence and the accounting information quality was also found by the prior studies (Klein, 2002b; Abbott et al., 2004). Increasing the resources and the improved status provides a more effective audit committee in fulfilling its monitoring role. RDT also describes the audit committee as the provision of resources.

That is, resources provide expertise and experience for firms to gain competitive advantage, particularly in FRQ (Puat Nelson & Devi, 2013).

Finally, according to this theory, it can be expected that the board and audit committee will have more access to external resources when they have various members with different links to such resources. It improves their responsibility in the function of supervision and oversight. Figure 3.1 indicates how two theories overlap with each other to maintain the level of justification for studying the relationship between the characteristics of CG and FRQ.

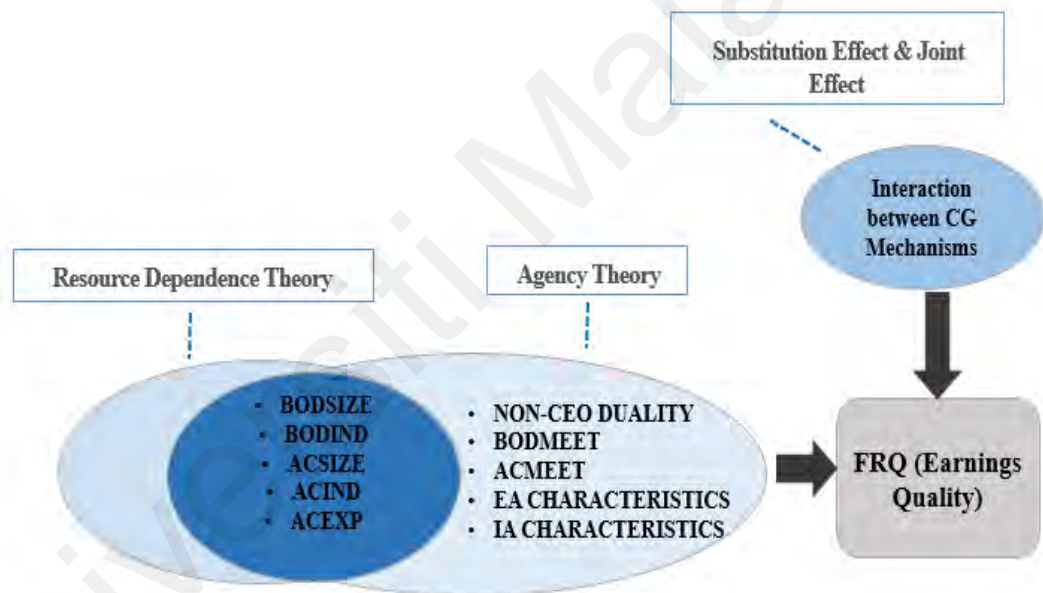


Figure 3.1: Theoretical Framework in the Current Study

3.2.3 Substitution Effect and Joint Effect

Rediker and Seth (1995) supported this view that studying multiple control mechanisms results in the excellent solution of the conflict between the investor and the manager. They argued that the equivocal findings regarding one specific governance mechanism highlight some critical questions about the governance mechanism in general. First, from a theoretical point of view, the firm performance and FRQ are probably

dependent on the efficiency of a group of governance mechanisms for controlling the agency problem, instead of being dependent on the effectiveness of a single mechanism. Even though the overall impact of a group of mechanisms is effective in making manager-shareholder interest alignment, the effect of any single corporate governance mechanism may not be sufficient for achieving such alignment. Second, different CG approaches can be used as a substitute.

The interactions among all direct players in the CG mosaic are important to achieve effective CG and high-quality financial reporting. These theoretical arguments have a significant methodological indication. On the one hand, if the association of one mechanism of CG with FRQ found not to be significant or to be negatively significant in some studies, no one can deny the importance of that mechanism in CG mosaic. It is because the interaction between that mechanism and other mechanisms in CG mosaic may affect the quality of financial reporting. It means they have a joint or complementary effect on FRQ (Alves, 2013).

On the other hand, if two mechanisms of CG are positively related to FRQ whereas the interaction between these two is negatively associated with FRQ, it may indicate the existence of substitution relationship between these two mechanisms to maintain the level of FRQ. That is, they have a substitution effect (Johl et al., 2013). These, however, have received little attention in the literature. Thus, the objective of this thesis is to examine the influence of all interrelationship between corporate governance mechanisms have been described in Cohen's Mosaic on FRQ.

3.3 Financial Reporting Quality and Corporate Governance

3.3.1 Relationship between Corporate Governance Characteristics and Financial Reporting Quality

The link between accounting quality and CG stems from the responsibility of CG in reducing information asymmetry associated with contracting. Accounting numbers are

used by shareholders to measure the performance of a firm and its managers. Thus, managers tend to manage earnings because accounting numbers affect their appraisal and their wealth. Therefore, CG is required to ensure that financial reports are reliable and represent the true state of the firm. Hence, governance quality is expected to be positively associated with earnings quality.

In simple words, CG can be defined as the procedure of managing and monitoring a corporation by appropriate accountability for financial and managerial performance (Rezaee, 2004). Corporate governance plays a crucial role in improving the efficiency of the capital market through its influence on corporate operating efficiency and effectiveness, and the integrity and quality of financial reports. New initiatives on corporate governance, including the Act and guiding principles by national stock exchanges and other professional organizations, should improve the transparency and quality of financial reports (Rezaee, 2004).

Financial reporting is defined as an interactive supply chain process that engages all participants of CG. This process is composed of: (1) preparing and certifying the financial statements, which is done by firm's management under the monitoring function of the board of directors, especially the AC; (2) verifying and guaranteeing the fairness of financial statements, which is done by external auditors; (3) evaluating the financial information quality, which is done by financial analysts; (4) assessing compliance of financial statements with applicable regulations and laws, which is done by regulators; and (5) monitoring use of financial information by shareholders and other stakeholders (Rezaee, 2004).

One of the fundamental roles of the CG system in the firm is ensuring financial reporting quality or earnings quality (Cohen et al., 2004). Prior studies have persistently researched the relationships between different CG mechanisms and different dimensions of FRQ, such as earnings management/manipulation (Chtourou et al., 2001; Xie et al.,

2003; Dechow & Dichev, 2002; McNichols, 2002; Niu, 2006; Bradbury et al., 2006; Larcker et al., 2007; Jiang et al., 2008; Rich, 2009; Dimitropoulos & Asteriou, 2010; Mashayekhi & Bazaz, 2010; Chalaki et al., 2012; Abdel-Meguid et al., 2011; Ahmed, 2013; Johl et al., 2013) and financial statement fraud (Beasley, 1996; Beasley et al., 2000; Goodwin & Seow, 2002; Salleh & Othman, 2016). Although they have found mixed results, most of them believe that good CG should mitigate the adverse impact of earnings management as well as alleviate the probability of misstatements due to fraud or errors and enhance the FRQ.

Additionally, there are some research has been conducted on the relationship between CG and earning quality by considering the value relevance model. They usually use Ohlson's Model to estimate this association (Ogeh Fiador, 2013; Alkdai & Hanefah, 2012). In this Regard, empirical research concerning the relationship between CG and value relevance of accounting information is expected to show that companies with strong CG have a higher value relevance of accounting information (Vafeas, 2000; Habib & Azim, 2008; Dimitropoulos & Asteriou, 2010). However, there is no consistency across studies about this result.

Concerning the relationship between CG and earning quality, primary qualitative characteristics of accounting information (FASB/IASB, 2010) as some proxies to measure earnings quality have not been extensively examined in the literature. Therefore, they are applied in this study

After the recent financial scandals that have been partially attributed to corporate managers' manipulation of earnings, there has been an international trend toward adopting and implementing CG mechanisms to fight against the opportunistic behaviours that weaken investors' credibility in financial information (Watts & Zimmerman, 1986). Cheng and Warfield (2005) argued that CG characteristics assist shareholders by aligning

the shareholders' interests with the managers' benefits and by improving the reliability of financial information and the integrity of the financial reporting process.

Many previous studies have investigated the role of different CG mechanisms in enhancing FRQ. Within the limits of this research, this study will review more those studies that have examined the relationship between CG mechanisms and earnings quality. Moreover, among CG mechanisms, this study discusses the responsibilities of the direct players of CG mosaic (defined by Cohen et al., 2004) in achieving high-quality financial reporting, especially earnings quality. Key players of CG mosaic are listed as (1) board of directors, (2) audit committee, (3) internal auditors, and (4) external auditors.

3.3.1.1 Board of Directors and Financial Reporting Quality

Using concepts from the CG and financial reporting literature, it deals with an ethical question of who (management or the board of directors) should be responsible for making basic strategic choices, and how the firm changes or manipulates the financial information. Gaa (2010) claimed that the board of directors is the responsible party for formulation (and monitoring) of the firm's communication strategy, and the management is the responsible party for the preparation of the published financial statements (and other reports). Based on this perspective, the board of directors' role (via its audit committee, if it has one) is approving the financial reports (prepared by the management) for publication. The board's monitoring role limits the freedom of the managers, who have a conflict of interest regarding the financial reports. The conflict arises because management has an incentive to engage in strategic financial reporting for its own benefit (Graham, Harvey, & Rajgopal, 2005; Gaa, 2010).

The board of directors keeps the ultimate control, although a large part of the control and decisions functions is delegated to the senior management by them (Beasley, 1996). Hence, the board of directors significantly plays a role in overseeing the earnings quality

that is reported to the public. Beekes et al. (2004) claimed that financial reports are representative of a firm's activities where the managers' interests might not be entirely congruent with shareholders' interests. However, Alves (2011) stated that boards have the responsibility for monitoring the quality of information offered in the financial statements. Therefore, they are responsible for controlling the management behaviour to assure that the managers' actions are consistent with the stakeholders' interests.

As anticipated by agency theory, the boards strengthen the financial reporting integrity through monitoring the managers. The responsibility of the corporate boards is to monitor the management actions, primarily those actions that are associated with the financial disclosure, performance, and tasks delegated to sub-committees (Karamanou & Vafeas, 2005).

Accordingly, Krismiaji et al. (2016) examined the effects of CG on the quality of accounting information. According to these authors, board governance has a positive association with relevance and faithful representation of accounting information. They state that board governance, as an effective monitoring instrument will secure that the company will produce relevant information and then will enhance the information's usefulness. Moreover, they believe that earnings management provides useful information to investors in their evaluation of a faithful representation of earnings. More reliable and informative accounting earnings are likely presented by companies that involve less in earnings management.

As a result, the role of the board of directors is taken into much consideration in the related literature. Sound governance by theories concerning boards of directors (e.g. agency theory) suggests that some board characteristics affect the quality of financial reports and earnings quality. Then, earnings quality has a significant influence on the confidence of the investor (Bhuiyan & Biswas, 2006; Mashayekhi & Bazaz, 2010). Several characteristics are broadly proposed within the CG's structure for the board of

directors to fulfil its duties effectively. Some of these characteristics are the size of the board of directors, independence of the board, the non-CEO duality and the number of board meetings.

(a) Board size and FRQ

The effectiveness of a board of directors is mentioned in different attributes, such as size and composition. Board size may be a significant factor to enable directors to control and monitor managers (Lipton & Lorsch, 1992; Jensen, 1993; Yatim et al., 2006). The scholars differentiate between the larger and the smaller board of directors among companies concerning the effectiveness of board size in reducing the agency problems.

According to agency theory, some researchers have observed the larger boards are more effective to safeguard shareholder interest since they have greater ability, a wider range of experiences, and a variety of expertise (Zahra & Pearce, 1989; Xie et al., 2003; Abdul Rahman & Ali, 2006). All of these advantages have the potential for increasing the cooperative governance of the board. Essentially, Haniffa and Hudaib (2006) concluded that the broader range of knowledge available in the larger boards is a factor for the facilitation of the business decisions to decrease the agency problem. Xie et al. (2003), Peasnell et al. (2005), Gonzalez and Garcia-Meca (2014), Aygun et al. (2014), and Honu and Gajevszky (2014) discovered that there is an association between the larger boards and lower levels of discretionary accruals, which is regarded as a proxy for earnings management respectively in the UK, French, American, Romanian, and Turkish companies. Similarly, Yu (2008) found that small boards are more susceptible to failure to detect earnings management. It can be interpreted in the way that it is more probable that the smaller boards are captured by the managers, or governed by the blockholders. In comparison, larger boards have more capability in monitoring the actions of top management (Zahra & Pearce, 1989).

Under the RDT, the larger and powerful boards (especially those who are independent) help enhance the connection between corporations and their environments. They can provide counselling and guidance services concerning the strategic options for the company and have a critical role in the creation of the corporate identity (Zahra & Pearce, 1989 and Abdul Rahman & Ali, 2006). Studies on the FRQ have concluded that managers of companies with smaller boards are more expected to engage in an opportunistic behaviour of earnings management that may deteriorate the quality of earnings numbers into interested parties (Chtourou et al., 2001; Bradbury et al., 2006; Wan Ismail et al., 2010). The findings of these studies are in line with the perception of resource dependency theory concerning the role of larger boards in reducing the incidence of earnings management.

However, there are also some empirical studies indicating higher effectiveness of the smaller boards compared to the large boards because of some reasons. First, there are fewer problems in the smaller boards concerning the coordination of the directors' actions. Managing of a larger board, which involves a large number of directors, is difficult because there is less cohesion among them (Jensen, 1993; Yermack, 1996; Eisenberg et al., 1998; Dimitropoulos & Asteriou 2010). Second, the decision-making process in the larger boards is weak and slower (Goodstein, Gautam, & Boeker, 1994), while there are better communication and timelier decision-making within the smaller board (Karamanou & Vafeas, 2005; Dimitropoulos & Asteriou 2010). The boards that have more members have greater difficulty in finding time to discuss and reach agreement on issues about the company's organizational structure (Lipton & Lorsch, 1992). Third, some research has shown that there are less severe agency problems in the smaller boards like the free-riding by the directors as compared to the larger boards (Karamanou & Vafeas, 2005; Dimitropoulos & Asteriou 2010; Gulzar, 2011; Mohamad, Abdul Rashid, & Shawtari, 2012).

The following studies have provided evidence for the association between the smaller boards and the higher quality of financial reporting/earnings. By using a sample of the Tehran Stock Exchange, Mashayekhi and Bazaz (2010) revealed that board size is positively and significantly associated to the earnings predictability which mentions that when board size enlarges, the variance of estimated error also raises which leads to a decline in earnings predictability. Thus, earnings quality is reduced. Beasley (1996) stated that the probability of financial statement frauds is significantly affected by the board size. His findings showed that the likelihood of financial statement fraud boosts when board size increases. Moreover, concerning earnings informativeness and board size, Vafeas (2000), Ahmed, Hossain, and Adams (2006), and Cho and Rui (2009) provided evidence that the returns-earnings relation is more significant (earnings number is more informative) in the firms with small board size than the large board size. They explain that if the boards have an intermediate number of members, it can be taken into consideration as an effective board.

Moreover, Alves (2011) found that large board size reduces the information content of incomes and intensifies the earnings management. Kang and Kim (2012) found that small boards compared to large boards are more effective in mitigating manipulation of earnings, which is done by management. Thus, small boards enhance earnings quality.

In addition to the significant results mentioned earlier, there are some other studies related to earnings quality have provided insignificant findings. For example, Firth et al. (2007), Dimitropoulos and Asteriou (2010), Sarikhani and Ebrahimi (2011), and Boulila Taktak and Mbarki (2014) produced the finding that there is no significant relationship between the board size and the reported earnings quality.

In Malaysia, previous studies have yielded mixed results on the effect of board size and the quality of financial reporting. The influence of the quality of the board of directors, the audit committee, and concentrated ownership on reducing earnings

management was examined by Abdul Rahman and Ali (2006) by using a sample including 97 Malaysian listed companies during the years of 2002 and 2003. Their results indicated that earnings management has a positive relationship with the board size. Consistent to Abdul Rahman and Ali (2006), Al-Dhamari and Ku-Ismail (2013) utilising a sample of Malaysian listed companies over the period 2008-2009, found that when the board increases, the ability of earnings to predict future operating cash flows decreases. However, Alkdai and Hanefah (2012), Al-Dhamari and Ku-Ismail (2014), Jamaludin et al. (2015), and Salleh and Othman (2016) respectively have revealed that the board size does not influence the value relevance of earnings, current earnings-future cash flow relation (predictive value of earnings), earnings management, and corporate fraud. In contrary to the previous studies in Malaysia, Al-Dhamari and Ku-Ismail (2012) stated that board size is positively and significantly related to earnings persistence, implying the high quality of earnings figures when the number of directors on the board is high. According to the conflicting evidence in the literature review, it is worth to predict the effect of board size on earnings quality. Thus, this study examines whether there is an association between board size and earnings quality.

(b) Board Independence and FRQ

In addition to the board size, board independence is thought to influence earnings quality. The quality of the board's responsibilities is further enhanced with the inclusion of independent directors who are influenced by external market incentives. The external market values the boards' services according to their decision control performance as independent directors. That is why the independent directors have more motivations to develop their reputations as experts in decision control (Fama, 1980; Fama & Jensen, 1983b; Beasley, 1996; Vafeas, 2000).

It is expected that the effectiveness of the independent directors is more than non-independent directors in improving the monitoring of the management and FRQ. It then will increase the reliability of financial statements (Fama & Jensen, 1983b; Gupta & Fields, 2009; Jaggi, Leung, & Gul, 2009). This is consistent with the agency theory, which argues that the divergence of interests between the investors and managers in a firm needs to be monitored and controlled effectively. According to agency theory, the independence of non-executive directors importantly plays a role in monitoring and overseeing the executives since it is assumed that they work independently, have adequate experience and professional knowledge, and care for their reputations (Fama & Jensen, 1983b).

Similarly, the resource dependency theory attributes the enhanced firm performance to NEDs because of their input for decision-making (e.g., investment and strategic planning decisions) as well as their networking value with the outside environment and other stakeholders. According to this theory, the board fundamentally assists the firm. The external linkages should be contacted for gaining more resources for the improvement of the firm success. The directors should satisfy their role by consultation or representation with other institutions to enhance firm success (Pfeffer & Salancik, 2003).

According to agency theory, several studies have been conducted on the relationship between board independence and FRQ or earnings quality. Using the US sample, Beasley (1996), Beasley et al. (2000), and Farber (2005) stated that there is a significant negative association between the number of independent non-executive directors on the board and the probability of fraudulent financial reporting. Kantudu and Samaila (2015) using Nigerian context revealed that independent directors have a significant positive relationship with FRQ, which is measured by considering primary and secondary qualitative characteristics of accounting information. Mashayekhi and Bazaz (2010) showed that when the number of independent directors increases, the company's earnings

quality is strengthened regarding earnings persistence and earnings predictability. However, they do not enhance the accruals earnings.

Moreover, Dimitropoulos and Asteriou (2010) by using a sample of non-financial firms of the Athens Stock Exchange, examined the influence of board independence on earnings management. They indicated that board independence has a negative association with earnings management and a higher proportion of independent directors increases earnings informativeness which is measured by share price-earnings association. It is consistent with some studies such as Klein (2002a), Xie et al. (2003), Davidson et al. (2005), Peasnell et al. (2005), Niu (2006), Benkel, Mather, and Ramsay (2006), Jaggi et al. (2009), Habbash (2010), Alghamdi (2012), Gonzalez and Gearcia-Meca (2014), and Alves (2014) which have reported a negative relationship between earnings management and the level of board independence in the US, UK, US, Australia, Canada, Australia, and Hong Kong, UK, Saudi, American Latin Markets and Portugal respectively. According to agency theory, these studies have held the view that monitoring function would be better performed when there are more independent directors on the board. Consequently, a higher level of earnings quality would be achieved by curtailing the magnitude of earnings management.

By contrast, a significant positive relationship between the proportion of independent directors and earnings management was found by Osma and Noguer (2007) in Spain. They found that a reduction in the percentage of independent directors leads to a decline in earnings management magnitude. However, using Canadian data, Park and Shin (2004) did not find that independent directors reduce earnings management. Likewise, using a sample of the Jakarta Stock Exchange, Siregar and Utama (2008) also could not support the view that a firm with a high proportion of outside directors on the board is less likely to engage in informative earnings management.

In Malaysia, Jamaludin et al. (2015) find the negative relationship between board independence and abnormal accruals and affirm that board independence can be as a tool to deter earnings management. However, some evidence in Malaysia indicates no significant relationship between the proportion of independent directors and earnings management and value relevance of earnings for non-bank entities (Abdul Rahman & Ali, 2006; Bradbury et al., 2006; Wan Ismail, 2011; Alkdai & Hanefah, 2012). By contrast, in the studies were conducted by Al-Dhamari and Ku-Ismail in Malaysia in 2013 and 2014, the negative and significant coefficient of association between earnings quality and board independence suggests a low predictive value (PV) of earnings for companies with more independent non-executive directors.

Concerning the above theoretical argument and empirical evidence and inconsistent results, according to the agency theory, this study desires to examine whether the existence of more independent non-executive directors is related to the earnings quality.

(c) Non-CEO Duality and FRQ

The board chairman's independence is the other characteristic affecting the board of directors' monitoring role. According to agency theory, if the roles of chairman and CEO are combined in one individual (CEO duality), it may lead to increased agency problems through undermining the monitoring effectiveness by the CEO (Jensen, 1993). Thus, the managers are enabled to look for private interests instead of shareholders' interests (Firth et al., 2007; Jensen, 1993; Chang & Sun, 2010). Cornett, Marcus, and Tehranian (2008) expressed that CEO duality is an opportunity for the concentration of executive power that can lead to management indiscretion. Therefore, given the above reasoning, it can be expected that the separation of the roles between CEO and chairperson (non-CEO duality) may provide more effective monitoring, and would enhance the financial reporting quality (Mohamad-Nor et al., 2010).

Prior studies have documented that firms with duality function may not be able to fulfil their responsibilities properly and are expected to be subjected to accounting enforcement actions by the SEC for infringement of GAAP (Abdul Rahman & Ali, 2006). In the literature regarding the earnings informativeness, the researchers have documented a decline in the usefulness and quality of earnings numbers, when the powers of chairperson and CEO are combined in one person (e.g., Gul & Lai, 2002; Anderson et al., 2003; Firth et al., 2007; Kantudu & Samaila, 2015). Ogeh Fiador (2013) and Ayadi and Boujelbène (2015) confirmed that CEO duality has a negative impact on the value relevance of accounting earnings in Ghana and France, respectively.

Moreover, Klein (2002a), Saleh, Iskandar, and Rahmat (2005), Sarkar, Sarkar, and Sen (2008), Gulzar (2011), Prencipe and Bar-Yosef (2011), and Boulila Taktak and Mbarki (2014) reported that when there is a CEO duality in the company, the potential for earnings management by the managers of the company is increased. Therefore, the earnings quality is impaired.

Additionally, Murhadi (2009) by using a sample of 384 industrial companies in the Indonesia Stock Exchange over the period 2005-2007, indicated that CEO duality has a relationship with high earnings management practices. His results support the agency theory that explains the chairman should be separated from the CEO as the CEO with more power can manage earnings easily (Abdul Rahman & Ali, 2006).

However, Cheng and Courtenay (2006), Petra (2007), Mashayekhi and Bazaz (2010), Alghamdi (2012), and Gonzalez and Garcia-Meca (2014) conducted some research in Singapore, the US, Iran, Saudi Arabia and Latin American firms respectively, and have reported that there is no evidence regarding the impairment of earnings quality by CEO duality.

In Malaysia, Saleh et al. (2005) endorsed the CEO duality affects unfavourably on earnings quality. Likewise, Al-Arussi, Selamat, & Hanefah (2009) supported CEO duality

has an adverse effect on the internet financial reports disclosed by Malaysian firms. Moreover, the results were shown by Al-Dhamari and Ku-Ismail in 2013, and 2014 indicate that the earnings have predictive value when the chairman is independent (non-CEO duality). Contrary, Abdul Rahman and Ali (2006), Bradbury et al. (2006), and Alkdai and Hanefah (2012) demonstrated that the CEO duality does not have any association with earnings management and value relevance of accounting information in Malaysia. Salleh and Othman (2016) also argued that CEO duality does not have a significant influence on restatements and corporate fraud. Thus, these contradictory findings provide an incentive for more studies concerning the impacts of non-CEO duality on earnings quality.

(d) Frequency of the Board Meetings and FRQ

As discussed above, more frequent board meetings improve board effectiveness. It is claimed that the directors on boards that have regular meetings are more probable to perform their tasks aligned with the investors' interest. Because they can devote more time to monitoring the managers and controlling issues such as earnings management and conflicts of interest (Lipton & Lorsch, 1992; Byrne, 1996). Kamardin and Haron (2011) also reported that frequent board meetings imply that the directors are aware of the company's activities and can monitor the strategy used in that company. Ultimately, it results in enhancement of the oversight of the financial reporting process (Vafeas, 2000).

Chen et al. (2006) by using a sample of 169 firms under the Chinese Securities Regulatory Commission (CSRC) over the periods 1999 – 2003 found that the higher frequency of board meetings decreases the probability of the fraud since regular meetings give the opportunity to the directors to recognise and solve the potential problems, especially the issues related to the financial reporting quality.

Similarly, three studies undertaken by Xie et al. (2003), Sarkar et al. (2008), and Alghamdi (2012) respectively in US, India and Saudi Arabia, have highlighted that a board that have frequent meetings may have more time to deal with some problems such as earnings management. Their results showed that earnings management has a significant and negative association with the frequency of board meetings. Also, the study was conducted by Gonzalez and Garcia-Meca (2014) showed that the boards' frequency of meeting in Latin American firms is negatively and significantly related to the absolute value of abnormal accruals. It shows that when the boards hold a higher number of meetings, the use of abnormal accruals is decreased.

Mashayekhi and Bazaz (2010) investigated the relationship between CG mechanisms and the quality of accounting earnings. They stated that the frequency of the board meetings is significantly and positively related to the company's earnings quality. In this study, earnings quality is measured by earnings predictability and persistence. According to their findings, it can be stated that increasing the number of board meetings may result in a more compelling argument between the board's directors. Thus, it would enhance the earnings quality in the Iranian capital market. However, their evidence did not indicate any significant relationship between the frequency of the board meetings and earnings quality, which is measured by accruals quality.

Nevertheless, an insignificant relationship has been found by most studies between board meetings and earnings management. For instance, Ebrahim (2007) and Habbash (2010) used a different sample and period and found that the frequency of the meetings may not confine the earnings management activities. They state that frequent meetings might not always be a representative of an active board of directors. It should be noted that the studies carried out for investigating the board meetings and earnings management have been low-key. Therefore, it is not possible to generalise their claims. They agree with the Jensen (1993) who argue that board meeting cannot be used in determining board

effectiveness because other factors exist such as length of the meeting, that need to be taken into consideration.

Similarly, Kantudu and Samaila (2015) demonstrated that there is an insignificant negative relationship between board meetings and the FRQ of the listed oil marketing firms in Nigeria. This finding suggests that the number of meeting causes increasing the earning manipulation, which reduces the financial reporting quality. The negative relationship between board meetings and the quality of earnings in the oil marketing industry can be due to the exclusion of financial expert as one of the research variables.

In Malaysia, Salleh and Othman (2016) by comparing two groups of companies listed under the Bursa Malaysia (99 fraudulent companies versus 99 non-fraudulent companies) in ten years (2000-2010), examined the influence of the frequency of board meeting in discovering the firm's fraud. The finding indicates that board meetings have a significant impact on corporate fraud. Therefore, further investigation is required to specify whether the frequency of board meeting affects earnings quality.

Consequently, since there is some controversy about the findings of the prior research, this study applies four main elements of board characteristics (board size, board independence, the frequency of board meeting, non-CEO duality). It expects that these components have a relationship with the quality of earnings according to IASB/FASB's (2010) conceptual framework. Based on what discussed above, the main hypothesis is proposed as follows:

H1: There is a relationship between board characteristics and earnings quality.

Based on some board characteristics, this study develops subsidiary hypotheses as follows:

H1a: There is a relationship between board size and earnings quality.

H1b: There is a relationship between board independence and earnings quality.

H1c: There is a relationship between non-CEO duality and earnings quality.

H1d: There is a relationship between the frequency of board meetings and earnings quality.

H1e: There is a relationship between board quality and earnings quality.

3.3.1.2 Audit Committee and Financial Reporting Quality

The audit committee is considered as a sub-committee of the board of directors. Companies typically employ the audit committee member from the board of directors, which plays an oversight role to prepare financial statements and make a communication with the auditors on behalf of the shareholders (Sloan, 2001).

Audit committees might have the responsibility for mitigating the agency problem between the company and the external shareholders through monitoring its financial reporting. In other words, as expected by the agency theory, the audit committee responsibility is monitoring and overseeing the financial reporting integrity. Hence, this fact is more emphasised that the role of the audit committee is avoiding financial statements fraud (Klein, 2002a).

The purpose of the audit committee is to ensure the accuracy of the financial reports (Buchalter & Yokomoto, 2003). Regulators around the world have asserted the significant role of audit committees in financial reporting even before the occurrence of the financial scandals in the last decades. For example, in the 1980s, the New York Stock Exchange (NYSE) required all firms listed on the major American stock exchanges to have an audit committee. The existence of audit committee provides structural monitoring, which ensures the investor confidence in the quality of financial reports (Klein, 2002a; Bédard & Gendron, 2010). Ultimately, since the beginning of the 1990s, the audit committee's effectiveness in monitoring the financial reporting process has been regarded as one of the most critical subjects in CG debates (Gendron & Bedard, 2006).

Laux and Laux (2009) asserted that the audit committee is responsible for the monitoring and overseeing the quality, reliability, and integrity of the financial reporting process without interfering with the management decisions and functions related to the financial statements' preparation. Laux and Laux (2009) believed that the main responsibilities of the audit committee include assignment, keeping, and even firing the external auditors if their performance is reduced. The audit committee is responsible for monitoring the managers, overseeing the internal audit function, evaluating the independence of the auditors, guaranteeing the quality of financial disclosure, and determining the financial reporting quality and transparency. From the perspective of financial reporting quality, this implies that an effective audit committee is helpful for the auditor to become more aggressive to diminish excessive opportunistic behaviour of the management (Cohen et al., 2004). Hence, the accounting earnings would be more reliable with higher quality when the opportunistic action of the management is decreased using monitoring systems (Dechow, Sloan, & Sweeney, 1996).

Apart from the benefit that is gained from the establishment of an audit committee, prior studies have proposed that the size, independence, expertise, and meeting frequency of audit committee may influence the effectiveness of audit committee in its monitoring role (e.g. DeZoort et al., 2002). In this regard, there are several empirical studies that examine the characteristics of the audit committee and identify those that enhance the quality of financial reporting (Klein, 2002a; Xie et al., 2003; Abbott et al., 2004; Krishnan, 2005; Lin, Li, & Yang, 2006; Zhang, Zhou, & Zhou, 2007; Ahmad-Zaluki & Wan-Hussin, 2010).

(a) Audit Committee Size and FRQ

The effectiveness of the audit committee can be defined by different attributes. One of these attributes is the audit committee size. Kalbers and Fogarty (1993) expressed that the

size of the committee may reflect the importance of audit committee power. DeZoort et al. (2002) posited that the audit committee must have enough number of members to achieve the effectiveness and to administrate its responsibility perfectly.

There are some different theories and research regarding the effectiveness of the smaller and the larger audit committee in alleviating the agency problems among companies.

According to agency theory, the larger audit committee may provide more oversight and better monitoring over the financial reporting process. Such monitoring is assumed to decrease the probability of financial restatements and then improve earnings quality (Lin et al., 2006). In this regard, Garcia, Barbadillo, & Pérez (2010) and Fodio et al. (2013) also revealed that audit committee size is negatively and significantly related to the abnormal accruals. They discussed that a larger audit committee has more capability, accesses to more resources, and can perform its duties well. Therefore, this leads to higher earnings quality.

Based on the RDT, Pearce and Zahra (1992) mentioned that when the audit committee size increases, the audit committee effectiveness also enhances because it has access to more resources in monitoring internal control systems and the financial reporting process (Anderson et al., 2004). Thus, it would be more effective in disclosing and resolving potential problems in the financial reporting process and coping with the complexity of the accounting and financial matters (Braiotta, 2000). Pincus et al. (1989) also explained that if the firm's audit committee is composed of a few numbers of members, it will devote less time to oversee the hiring of auditors, challenge the management, and hold the meeting with the personnel of the internal control system. Bédard et al. (2004) stated that it is likely that more resources provide the necessary diversity and power of viewpoints and expertise for ensuring effective monitoring.

In this regard, by using a sample of 106 US companies, Lin et al. (2006) found that

there is a negative relationship between audit committee size and restatement of earnings. Furthermore, Lin et al. (2006) reported that audit committee size is negatively related to earnings management, meaning that at least a specified number of members on the audit committee is required to be related to the FRQ.

Contrary to view mentioned above, by using Australian markets' data throughout 2008– 2009, Aldamen et al. (2012) found that smaller audit committee which is more experienced and expert in financial matters have more potentials to be related to high firm performance. These scholars posited that when the audit committee size is small, they are more effective monitors because they do not have coordination and communication problems. Similarly, Al-Matari et al. (2012) in the Saudi companies showed the same results. Their results did not support the agency theory and showed that the audit committee size had a significant but negative association with firm performance. Moreover, in the context of earnings quality, a positive association between audit committee size and earnings management was found in Jordanian firms by Almasarwah (2015).

According to the Blue Ribbon Committee's recommendations (1999) and based on the U.S. Stock Exchanges listing requirements, companies are mandated to have at least three directors on audit committees. It means that larger audit committee is an indicator of the quality. However, it seems that previous studies could not find a relationship between audit committee size and FRQ (e.g., Krishnan & Visvanathan, 2008; Krishnan, 2005; Zhang et al., 2007). Accordingly, Xie et al. (2003), Bedard et al. (2004), Davidson et al. (2005), Baxter and Cotter (2009), Habbash (2010), Aghamadi (2012), Adiguzel (2013), and Soliman (2014) respectively by using a sample collected from US, US, Australia, Saudi Arabia, UK, Turkey and Egypt, revealed no significant relationship between the audit committee size and earnings management. Likewise, Abbott et al. (2004) found that there is no effect of audit committee size on the restatement of earnings.

In Malaysia, Nurwati et al. (2010) provide weak evidence that audit committee size is positively associated with the quality of financial information disclosure, proxied by the accuracy of initial public offering management earnings forecast. Moreover, Wan Ismail et al. (2010) provide evidence that audit committee size was positively related to earnings quality (measured by accrual quality) for non-family firms in Malaysia over the period 2003-2008. These results support the RDT (Pearce & Zahra, 1992). Nevertheless, a significant association between audit committee size and earnings quality is not reported by this research for the full sample of Malaysian companies. Conversely, Al-Rassas and Kamardin (2015b) stated that the large audit committee is related to higher discretionary accruals (lower earnings quality) in the listed companies of Malaysian Main Market over the period 2009-2012.

Therefore, according to the above conflicting studies and their results, the audit committee size is worth to examine in this study.

(b) Audit Committee Independence and FRQ

One of the aims of the audit committee is to donate reviewing financial information without any bias and enhancing the process of financial reporting. In this regard, audit committee independence as a characteristic of audit committee effectiveness can increase FRQ (Kirk, 2000). Abbott et al. (2004) held the view that a minimum number of non-executive directors on the audit committee is required. It is a significant contribution to promote the position and organisational importance of CG mechanism in monitoring and overseeing the financial reporting process.

According to agency theory, the existence of independence non-executive members on audit committee enhance their effectiveness in monitoring role and offer strong governance in assuring the financial statements integrity. It is because they are assumed

to mitigate the conflicts of interest and have less motivation to sacrifice neutrality (SEC, 1999; Chandar et al., 2012).

Based on the RDT, previous studies such as Klein (2002b) and Abbott et al. (2004) believe that independent directors increase resources and enhance the situation will make audit committee more effective in fulfilling its monitoring role.

A more extensive review of the audit committee literature supports the different points of view about the relationship between the independent audit committees and the FRQ.

A negative relationship between audit committee independence and the probability of financial reporting fraud and restatement was reported by Abbott et al. (2004). Moreover, Persons (2005) documented that the independent audit committee enhances the financial reporting process positively. They indicated that when the audit committee only consists of independent directors, the probability of financial statement fraud is reduced. Moreover, some scholars have stated that the maximum number of independent directors on the audit committee reduces the opportunistic and self-interested manipulation of financial information by managers. In other words, audit committee independence is negatively related to abnormal accruals as a proxy for earnings management (Klein, 2002a; Yang & Krishnan, 2005; Davidson et al., 2005; Benkel et al., 2006; Bradbury, 2006; Baxter & Cotter, 2009; Chang & Sun, 2010; Habbash, 2010; Yunos, 2011; Liu, Harris, & Oma, 2013; Soliman, 2014). This finding is consistent with Bedard et al. (2004), who discussed that if all the audit committee members are independent, discretionary accruals will be lowered; thus, earnings management practices are reduced. Additionally, Woidtke and Yeh (2013) argued that the audit committee with whole independent directors and audit committee with maximum independent directors enhances accounting earnings' informativeness.

Consistent with this argument, Anderson et al. (2003) and Lin et al. (2006) stated that the existence of audit committee with independent directors is deemed to enhance the

credibility and reliability of disclosed earnings numbers. Agrawal and Chadha (2005) and Mustafa and Yusof (2010) supported this argument by providing evidence on the relationship between higher audit committee independence and the FRQ. Moreover, the evidence contained in the studies of Bryan, Liu, and Tiras (2004), and Siagian and Tresnaningsih (2011) has indicated that the quality of earnings numbers is improved with the existence of independent members on the audit committee.

Contrary to the argument mentioned above, Fodio et al. (2013) found that audit committee independence has a positive relationship with discretionary accruals. It shows that these characteristics may not reduce the level of earnings management. Similarly, the result of the study was conducted by Kantudu and Samaila (2015) indicated that when the number of non-executive directors on the audit committee is increased, FRQ is lowered. These findings are unanticipated. Because as discussed earlier based on agency theory, the audit committee monitors and supervises the financial reporting process, internal control system, and earnings management in a company (Kantudu & Samaila, 2015).

Moreover, there are some other studies have provided evidence that audit committee independence was not significantly related to the reporting quality of earnings numbers. For instance, Davidson et al. (2005), Petra (2007), and Alghamdi (2012) found that audit committee independence has no relationship with discretionary accruals. Similarly, Lin et al. (2006) and Siregar and Utama (2008), respectively, in the US and Indonesia were unsuccessful in supporting the argument that an independent audit committee can lower earnings management.

In Malaysia, Al-Dhamari and Ku-Ismail (2013) found that audit committee independence does not have any significant impact on future operating cash flows. Moreover, Saleh, Iskandar, and Rahmat (2007) discussed that the audit committee with full independent directors is negatively related to discretionary accruals; thus, reduces earnings management practices. Abdul Rahman and Ali (2006) stated that the presence

of the audit committee with independent members is deemed to restrain the managerial misstatement of financial reports.

However, existing studies on the relationship between audit committee independence and earnings quality have reported unclear findings and have not conclusively determined whether audit committee independence influences the earnings quality. That is why considering audit committee independence in the study of the relationship between CG and earnings quality is worth to examine.

(c) Frequency of Audit Committee Meeting and FRQ

The directors in the audit committee meeting discuss the financial reporting process. Indeed, the frequency of audit committee meetings is where the monitoring process of financial reporting is reviewed. The frequency of audit committee meetings is one of the important factors of increasing the accuracy of financial information (Dellaportas, Rochmah Ika, & Mohd Ghazali, 2012).

Menon and Williams (1994) mentioned that the audit committee would be perceived as more active if the frequency of its meetings is more. According to agency theory, Mangena and Tauringa (2008) pointed out that the more active audit committee causes that the members be more successful in performing their monitoring role. In the audit committee meetings, the members are provided with more knowledge and information concerning the related accounting and auditing issues (Raghunandan et al., 2001), and they are enabled to analyse and take proper actions to deal with the problem of reporting (Abbott et al., 2003).

Several works have investigated the relationship between the frequency of audit committee meetings and FRQ. Given the restatement (one of the indicators to present low reporting quality), Abbott et al. (2004) found the audit committees of the companies that restate their financial statements probably do not meet minimum four times per year.

Farber (2005) indicated that fraudulent companies tend to hold fewer audit committee meetings and have fewer financial experts on the audit committee.

Li, Pike, & Haniffa (2008) also demonstrated that there is a positive association between the frequency of the audit committee meetings and the corporate disclosure level. Mat Yasin and Puat Nelson (2012) and Kent, Routledge, & Stewart (2010) reported that the higher frequency of the audit committee meetings is related to the higher probability of finding solutions for the financial issues by the audit committee. Song and Windram (2004) investigated the influence of the audit committee's responsibility in promoting financial reporting in the US. They indicated that the number of audit committee meetings increases the FRQ.

Consistently, Anderson et al. (2003) and Firth et al. (2007) documented that when audit committee meetings are held in a firm frequently, it leads to reporting the informative earnings numbers. In addition, Chtourou et al. (2001) and Soliman and Ragab (2014) found that the ability of management is reduced to manipulate earnings when the audit committee members meet frequently; therefore, earnings quality is enhanced. Xie et al. (2003) and Liu et al. (2013) stated that the frequency of audit committee meetings is related to lower earnings management. By using a sample of 108 non-financial companies between 2003 and 2006 in Spain, Garcia et al. (2010) found that the number of audit committee meetings has a significant negative relationship with the manipulations of earnings.

However, contrary to results, as mentioned earlier, Beasley et al. (2000) examined the relationship between the probability of financial statement fraud and the frequency of audit committee meetings. They found that audit committee meeting is not positively related to the financial reporting's manipulation. Similarly, Bédard et al. (2004), and Yang and Krishnan (2005) could not find such a relationship. Lin et al. (2006) also found that there is no significant association between audit committee meetings and earnings

restatement. Likewise, Bryan et al. (2004) and Aghamadi (2012) showed that the frequency of audit committee was not significantly related to the earnings quality. Consistently, the study was conducted by Baxter and Cotter (2009) revealed that to reduce earnings management or to enhance earnings quality, a higher number of audit committee meetings are not necessarily required. Moreover, in Australia, Davidson et al. (2005) found that active audit committees do not influence the lowering of earnings management.

In Malaysia, conversely, Al-Rassas and Kamardin (2015b) showed that more frequent audit committee meetings are associated with lower earnings quality (higher abnormal accruals). Abdul Rahman and Ali in 2006 concluded that the frequency of the audit committee meeting has an insignificant but negative role in preventing the incidence of earnings management in Malaysia. However, Saleh et al. (2007) stated that the audit committee, which meets frequently, leads to lower earnings management practices. Since the previous research on the association between audit committee meetings and earnings quality show different results, the frequency of audit committee meeting is worth to examine in the study of the relationship between CG and earnings quality.

(d) Audit Committee Financial Expertise and FRQ

Besides other characteristics of the audit committee, the financial expertise of the audit committee members is a significant factor in the improvement of the financial reporting process (Lin et al., 2006). Financial experts with a high degree of accounting background or experience are more likely to understand better the accounting information included in financial statement and increase the audit committee's ability to detect earnings management activities (Chang & Sun, 2010).

According to agency theory, the audit committee members who have competency and qualification in financial subjects are assumed to be more diligent in monitoring and supervision of the internal controls and financial reporting process (BRC, 1999). Thus, it

is expected that expert members are more likely to reduce the agency problem that is caused by the earnings' manipulation by the management (Puat Nelson & Devi, 2013).

Moreover, concerning the agency theory, some scholars believe that the members of the audit committee who have the financial expertise importantly contribute FRQ (Carcello, Hollingsworth, Klein, & Neal, 2008). Also, it is mentioned that when there are some members with accounting expertise in the audit committee, monitoring will be performed by the audit committee effectively. It, thus, promotes some attributes of the FRQ (Song & Windram, 2004; Defond, Hann, & Hu, 2005).

Furthermore, Puat Nelson and Devi (2013) describe that RDT can be used for explaining the situations involving the expertise and knowledge of the directors. They state that based on RDT, the audit committee as a provision of resources, expertise and experience for firms is an essential factor to gain competitive advantage, especially in financial reporting quality. It also argues that the mere presence of independent directors on the audit committee as the monitoring system does not suffice, and makes a connection between the knowledge, expertise and experience of the directors that can be utilised to assist them in their functional role as audit committee members.

Based on the RDT, some studies have stated that the audit committee members who have previous experience in accounting and auditing, and, or have prior positions in management (i.e., chief executive officer, chief financial officer) will be more expert and knowledgeable. They also have a good reputation and can network with the external environment efficiently and competently. Therefore, the magnitude of earnings management will be lowered in the light of audit committee expertise (Dechow et al., 1996; Haniffa & Cooke, 2002; Haniffa & Hudaib, 2006).

Findings from empirical studies that examine audit committee characteristics and financial reporting quality also support the view that audit committee members' expertise is an essential factor in constraining managers' tendency to engage in earnings

manipulation (e.g. Xie et al., 2003; Bédard et al., 2004; Abbott et al., 2004; Agrawal & Chadha, 2005; Yang & Krishnan, 2005; Dhaliwal, Naiker, & Navissi, 2006).

As reported by Xie et al. (2003), there is an association between the board and audit committee members with corporate or investment-banking experiences and the companies with lower earnings management or smaller discretionary current accruals. They claimed that corporate and financial experiences and skills are significant for specifying the effectiveness of directors that monitor the function because it helps provide a better understanding of the way of earnings management. Likewise, Bédard et al. (2004) concluded that there is a negative relationship between the audit committee financial expertise and the income-increasing and income-decreasing earnings management, according to the extent of abnormal accruals. They stated that if a financial expert is present on the audit committee, the probability of aggressive earnings management is reduced. Yang and Krishnan (2005) also reported consistent findings indicating that in the firms where audit committee directors have higher governance expertise, the quarterly earnings management is lower. Similarly, Liu et al. (2013) stated that well-structured and well-functioned audit committees can reduce earnings management. They found that the committee members' financial knowledge is related to lower earnings management.

The relationship between audit committee financial expertise and financial reporting restatements was examined by Abbott et al. (2004). Their findings showed that an audit committee without a member with financial expertise is positively related to the incidence of financial reporting restatements. Aligned with Abbott et al. (2004), Agrawal and Chadha (2005) also reported that the companies, which possess an independent financial expert in their audit committee have a lower likelihood of the restatement of financial statements.

However, some studies on FRQ have concluded that neither the financial expertise nor accounting experience can ensure disclosing of high-quality earnings numbers (Chtourou

et al., 2001; Johari, Saleh, Jaffar, & Hassan, 2008). In this regard, Lin et al. (2006) and Alghamdi (2012) stated that audit committee financial expertise does not have a significant association with earnings restatements and earnings management, respectively.

In Malaysia, Abdul Rahman and Ali (2006) also stated the fact that the audit committee financial expertise has an insignificant impact on prohibiting earnings management's occurrence. Moreover, Al-Dhamari and Ku-Ismael (2013) explained that audit committee expertise does not have a significant influence on the earnings' predictive ability.

Since the findings of prior studies regarding audit committee characteristics are different, this study predicts that four main characteristics of the audit committee are more likely to be related to the earnings quality. It leads to the next main hypothesis.

H2: There is a relationship between audit committee characteristics and earnings quality

Regarding some characteristics of the audit committee, this study develops some subsidiary hypotheses as follows:

H2a: There is a relationship between audit committee size and earnings quality.

H2b: There is a relationship between audit committee independence and earnings quality.

H2c: There is a relationship between the frequency of audit committee meeting and earnings quality.

H2d: There is a relationship between audit committee financial expertise and earnings quality.

H2e: There is a relationship between audit committee quality and earnings quality.

3.3.1.3 Internal Audit and Financial Reporting Quality

Recently, in business activities, the internal audit function (IAF) is regarded as essential support for executives, audit committees, boards of directors, and other stakeholders (Ruud, 2003). The IAF often has responsibility for continuous monitoring of management's opportunistic behaviour, especially those relating to financial reporting (Johl et al., 2013).

Some international organisations have established the requirements of IAF for financial reporting (BRC, 1999; IIA, 2003). The FASB recognises that internal auditors are considered as the crucial factors and active contributions to providing more effective CG practices and enhancing financial reporting process (Salierno, 2007). Strong CG is linked to higher quality financial reporting (Cohen et al., 2004; Peasnell et al., 2005).

The activities conducted by the internal auditors can be summarised as the functions below: (1) evaluation of the effectiveness and efficiency of the firm's operations; (2) guaranteeing the effectiveness and sufficiency of the internal control system in reaching its goals; (3) improving the efficiency of the governance, risk management, and control; (4) inspecting the financial reporting process to ensure the quality and integrity in generating relevant, reliable, and useful financial information for making the decisions; (5) assuring responsible CG; and (6) providing an effective defence against the fraud, playing a role in monitoring risks and avoiding and discovering the fraud which endangers the financial reporting integrity and quality, and being as the tools for the audit committee with the capacity for independent assessment of the fraud risks and anti-fraud actions run by the executives (Rezaee, 2004; Carcello et al., 2005; Chambers, 2005; Sarens et al., 2012; Gras-Gil, Marin-Hernandez, & Garcia-Perez de Lema, 2012).

In recent years, it is stated that internal control over the reported earnings process and the concentration on the reliability of financial reporting would be increased by more investment in internal audit function (Gramling et al., 2004; Carcello et al., 2005).

Various domestic and global organisations have specified the primary role of the IAF in the financial reporting process because its establishment results in higher quality financial reporting (Al-Shetwi, Ramadili, Chowdury, & Sori, 2011). The establishment of IAF has been proposed by stock exchange listing requirements and most governance regulatory guidelines (Johl et al., 2013). Al-Shetwi et al. (2011) state that if the quality of IAF increases, the probability of internal control faults would probably decrease, leading to an increase in the quality of financial reporting.

Studies conducted by Lowe, Geiger, and Pany (1999) and James (2003) have provided evidence for the influence of the internal audit information on the stakeholder perceptions of financial reporting reliability. Additionally, shareholders with higher access to IAF reports have more confidence regarding the reliability of the financial statements compared to those with no access to these reports (James, 2003; Archambeault, DeZoort, & Holt, 2008; Holt & DeZoort, 2009).

Abbott et al. (2016) studied the relationship between the quality of IAF and FRQ. They confirmed that competence and independence are required, but these factors are not individually adequate for determining the IAF quality. These authors investigated the potential effect of IAF quality serving as a joint function of the IAF's independence and competence. A competent auditor is more likely expected to detect the financial reporting misstatement. However, the detecting and reporting the misstatement is dependent upon the independence or objectivity of the auditor.

Although the IAF has the potential to influence a company's earnings quality significantly, the little rigorous examination has focused on this potential due to the lack of relevant data. The current study has been informed of just three prior studies that have used the archival data for investigating the impact of IAF on earnings quality. Davidson et al. (2005) observed no evidence that shows the presence (vs absence) of an IAF is related to the lower earnings management levels. Prawitt et al. (2009) discovered

evidence concerning the association of the IAF quality and a balance in the earnings management level. Johl et al. (2013) provided experimental evidence on the IAF role in Malaysia as an emerging economy. They showed that IAF is a crucial internal governance mechanism, which has been mainly neglected in assessing the company's FRQ. Nevertheless, this study indicated that the relationship between internal audit quality and abnormal accruals is a negative association, and particularly the internal audit organisational independence, investment, and financial focus audit activities are related to the lower income-increasing (opportunistic) abnormal accruals.

The establishment and existence of an internal audit have more benefits (Davidson et al., 2005). Also, prior studies have proposed that the size, competence, objectivity and the financial focus of internal auditing (Prawitt et al., 2009), the internal audit quality control assurance, internal audit investment, internal audit organisational independence, and internal audit experience (Johl et al., 2013) may impact their monitoring effectiveness of internal auditing. Therefore, due to the limitation of the secondary data, this study only uses experience (defined by Johl et al., 2013) and independence (defined by James, 2003; Ahlawat & Lowe, 2004; Al-Rassas & Kamardin, 2015a) as two components of internal audit characteristics.

(a) Internal Audit Experience and FRQ

Agency theory contends that internal auditing, in common with other intervention mechanisms like financial reporting and external audit, helps keep the cost-efficient contracting between the managers and owners. This theory not only is useful for explaining the internal audit existence in the organisations but also it can help explanation of the internal audit department's characteristics, for instance, the internal audit experience (Adams, 1994, Lin et al., 2011).

Mat Zain, Subramaniam, and Stewart (2006) found that internal auditors would have a higher contribution in the financial statement audits if most of them are experienced in the accounting and auditing fields. The previous studies have also reported that the detection and prevention of fraud are more likely done by effective internal audits (DeZoort, 1998; Beasley et al., 2000).

Moreover, Prawitt et al. (2009) investigated the relationship between internal audit quality (qualification and experience) and earnings management. By using a sample of 218 firms of the US over the period 2000-2005, they gained adequate data for estimating the abnormal accruals models. According to their findings, there is an insignificant association between the internal audit experience and earning management.

Johl et al. (2013) examined the association between internal audit quality and FRQ. They used the data from Malaysia during 2009-2010, finding a positive relationship between the internal audit experience and abnormal accruals. The authors did not expect such a finding. It indicated that the companies with an IAF for a longer time are related to the higher earnings management (more income-increasing accruals). This result is not consistent with the insignificant findings by Prawitt et al. (2009) and Lin et al. (2011).

Hutchinson and Mat Zain (2009) studied the relationship between internal audit experience and accounting qualification and firm performance (ROA), with audit committee independence and opportunities for growth in Malaysia. This study was conducted on 60 companies listed under Bursa Malaysia in 2003. They reported a significant relationship between internal audit experience and firm performance.

Since there is a little study on the relationship between internal audit experience and FRQ and there are some contradictory findings, therefore, it is worth considering the experience of internal audit as a characteristic of internal audit mechanism in the study of the association between CG and earnings quality.

(b) Internal Audit Independence and FRQ

According to Adams (1994), the existence of an internal audit and the nature of the internal audit function can be supported by agency theory. It also describes internal audit independence as a new approach assigned to the internal auditors' work. Based on the increasing role of internal auditing in the current CG, further attention has been given to independence (Christopher, Sarens, & Leung, 2009). Independence, in other words, is an alternative characteristic by which internal auditors are enabled to detect and disclose the management's fault and report all critical issues without any scare (Abbott et al., 2016).

The independent external auditors ensure the investors regarding the quality of the financial statements. However, the independent internal audit assures the board through the audit committee (Christopher et al., 2009). In this regard, the agency theory offers the foundation for explaining the independent role and tasks delegated to the IAF (Adams, 1994). Hence, the company should have a higher investment in the IAF for decreasing the agency costs between the managers and investors (Adams, 1994) to guarantee financial reporting reliability. Mutchler, Chang, and Prawitt (2001) indicated the significance of independence by explaining that accountability, independence, and objectivity would be more demanded by growing the responsibilities of internal auditors. They also suggest that the extended responsibilities of the IAF in a changing business environment, along with increasing economic competition and globalisation, impose pressure on the IAF, which can threaten the internal audit independence.

Given the internal audit independence, IAF can be set out in-house by the internal audit department in the firm (Non-independence), or it can be outsourced to other professional firms (independence).

According to the proponents of outsourcing the IAF, the companies performing the IAF in-house in their firms are less probably independent than those with outsourced IAF. The independence level may be undermined since they are employed and paid by the

firm. Johl et al. (2013) declared that outsourced IAF is considered more independent and able to fulfil the monitoring role better than the in-house IAF. Further, this is due to the probability that the management of the company might influence the decision by the internal audit function, and, thus, in turn, affect the independent status of the internal auditors (Margheim, 1986; James, 2003; Ahlawat & Lowe, 2004). Also, outsourced internal auditors believe that they confront with higher legal liability compared to the in-house internal auditors. It can influence their incentives concerning audit issues that affect the quality of external financial reporting (Ahlawat & Lowe 2004). Similarly, according to an experimental case, Prawitt et al. (2012) demonstrated that outsourced IAF to the external audit provider causes a lower accounting risk compared to the in-house internal audit.

Al-Rassas and Kamardin (2015a) stated that the in-house IAF increases the discretionary accruals. Their findings imply that outsourcing the IAF is considered as more professional than in-house IAF. They also indicated that outsourcing the IAF and having a higher investment in IAF increase the level of earnings quality.

Desai et al. (2011), using an experimental design in the USA, find that external auditors assess the quality of outsourced IAF to be higher than the quality of an in-house IAF and thus are more willing to rely on outsourced IAF than in-house IAF.

However, Johl et al. (2013), by using Malaysian data, observed that the IAF causes an increase in the discretionary accruals when it is outsourced, while the in-house IAF reduces the discretionary accruals. It is different from the insignificant findings of this variable in the studies by Prawitt et al. (2009) and Lin et al. (2011).

Consequently, according to little prior research in the area of the IAF, it seems the experience and independence of IAF are worth examining during the investigation of the relationship between CG and earning quality. Other researchers have examined the independence of IAF by survey method. However, collecting data from the survey to

evaluate the independence of IAF cannot be possible in this study. It is because this study has considered a long duration (7 years) to cover two different dates of CG's reformation in Malaysia (2007, 2012). Thus, finding some directors attended during seven years in a company to be able to participate in such a survey or an interview is less probable. Therefore, in this study, independence of IAF is defined by way of internal audit's establishment or sourcing internal auditing (in-house or outsource IAF).

Finally, to test whether the IAF affects the earnings quality, the following main hypothesis is developed:

H3: There is a relationship between internal audit characteristics and earnings quality.

According to some characteristics of internal audit, this study develops some subsidiary hypotheses as follows:

H3a: There is a relationship between internal audit experience and earnings quality.

H3b: There is a relationship between internal audit independence and earnings quality.

H3c: There is a relationship between internal audit quality and earnings quality.

3.3.1.4 External Audit and Financial Reporting Quality

The financial statement audit aims at improvement (or ensuring) of FRQ (Boone, Khurana, & Raman, 2010). Auditing decreases the information asymmetries available between managers and the firm's stakeholders and provides the outsiders with the opportunity to check the validity of financial statements (Cohen et al., 2004). It also ensures the credibility and quality of the financial information of the firm (Alves, 2013). Since auditors provide independent assurance of the financial statement prepared by the management, the auditor quality strengthens the financial information credibility. The auditors can effectively monitor the highly aggressive managers by diminishing the excessive earnings management techniques like unpredicted discretionary accruals

(Cohen et al., 2004). External auditors serve as the most direct monitors of financial reporting decisions and constitute the first line of defence against probable manipulation of earnings or accounting information (Abdel-Meguid et al., 2011).

The effectiveness of auditing and its ability to constrain earnings management is expected to vary with the auditor quality. Detection of questionable accounting actions and increasing the quality of the audit report by the high-quality auditors are more probable than the detection of dubious accounting actions by the low-quality auditors. Therefore, high-quality auditing can be regarded as an effective inhibitor for earnings management since it is likely that the reputation of the management is impaired, and firm value reduced in case of detection and discovery of the misreporting (Becker, 1998).

In this regard, many studies have suggested that higher audit quality reduces the earnings management level (Becker et al., 1998; Gul, Chen, & Tsui, 2003; Krishnan, 2003; Van Caneghem, 2004; Lin & Hwang, 2010).

The audit quality is conditional on some components or characteristics such as the audit firm size, audit fee, and the auditor independence (Watts & Zimmerman, 1986; Krishnan, 2003; Ahadiat, 2011). Thus, to measure the external audit quality in the investigation of the relationship between external audit quality and FRQ, this study identifies those components that enhance the quality of earnings.

(a) External Audit Firm Size and FRQ

There are various proxies for audit quality measurement. However, studies by Becker et al. (1998) and Francis and Schipper (1999) have used the auditor size as a proxy for the audit quality. These studies have concentrated mainly on the differences between big firm auditors and non-big firm auditors.

Becker et al. (1998) used the data for the USA and studied the impact of external audit quality on earnings management. These researchers observed that the clients of the Big 6

auditors (currently Big Four) utilise less discretionary accruals compared to the client firms of other auditors. Also, Francis and Schipper (1999) found that companies with Big 6 auditors possess lower discretionary accruals compared to the companies that are audited by non-Big 6 auditors. Krishnan (2003) and Chi, Lisic, and Pevzner (2011) indicated that a big audit company confines earnings management. Similar findings have been reported in the UK (Gore, Pope, & Singh, 2001), Mexico (Teitel & Machuga, 2010), Taiwan (You, Tsai, & Lin, 2003; Chen et al., 2005; Chiang, Huang, & Hsiao, 2011), Europe (Van Tendeloo & Vanstraelen, 2008), Iran (Gerayli, Yanesari, & Ma'atoofi, 2011).

However, some other works provided contrasting evidence. Li and Lin (2005) and Lin et al. (2006) used the data from the USA and found that the companies audited by Big 5 audit firms had more earnings management compared to those audited by non-Big 5 audit firms. Likewise, Antle, Gordon, Narayanamoorthy, and Zhou (2006) reported higher abnormal accruals in the client firms of Big 6 auditors compared to the clients of other auditors. They used a sample composed of British firms. Their findings were consistent with the findings by Alves (2013) and Vieira and Madaleno (2019), showing a significant positive association between Big 4 and earnings management in Portugal. Consequently, it seems that these findings are consistent with many corporate failures. It demonstrates that management has usually involved in earnings management, and big audit firms have not acted effectively in determining and avoiding corrupt accounting actions.

Some other studies also did not observe any significant association between Big 4 audit firms and earnings management. For instance, Maijor and Vanstraelen (2006) studied the influence of the quality of audit firms on earnings management in three countries of Europe (France, Germany, and the UK). According to their findings, it seems that a Big 4 audit firm does not create a restraint on earnings management. Piot and Janin (2007) found that the availability of a Big 5 auditor did not make a difference concerning

earnings management practices for a sample composed of the French companies. Using the data from the USA, Sun, Liu, and Lan (2011) observed an insignificant but positive association between earnings management and Big 4 audit companies. Zehri and Shabou (2011) similarly reported that Big 4 auditors did not decrease the discretionary accounting actions performed by the managers in the Tunisian SMEs. Additionally, Abdul Rahman and Ali (2006) and Al-Rassas and Kamardin (2015b) reported an insignificant relationship between Big 5 audit firms and earnings management for a sample of Malaysian companies.

Finally, according to the previous studies, taken together, they have proposed that audit firm size might provide a contribution toward increasing or decreasing earnings quality or even do not have an influence on earnings quality. Therefore, it is worth considering the audit firm size as a characteristic of the external audit mechanism in the study of the association between CG and earnings quality.

(b) External Audit Fee and FRQ

The audit fee serves as a proxy for external audit quality, and it seems to be a crucial monitoring mechanism for the alleviation of earnings management (high earnings quality) (Al-Rassas & Kamardin, 2015b). The agency theory posits that agents will not act to maximize the profits of principals and that the principals have limited ability to monitor whether or not their interests are being served appropriately by agents (Jensen & Meckling, 1976). Hence, to decrease the agency costs between the managers (agent) and investors (principals) and ensure the financial reporting reliability and quality of the audit, the company may pay the external auditors a higher fee.

O'Sullivan (2000) asserted that for a comprehensive analysis, more specialist auditors and longer audit hours are needed, which increase audit fees. Therefore, the higher audit fees suggest a higher quality of audit because more auditing is necessary to ensure that

the financial statements have been prepared without material misstatements (Deis & Giroux, 1996). Srinidhi et al. (2007) acknowledged that it is more probable that the audit fee shows the auditing efforts leading to the production of better accrual quality. Frankel et al. (2002) found an association between the audit fee and smaller discretionary accruals. Al-Rassas and Kamardin (2015b) studied the relationship between audit fees and earnings quality. According to their findings, there is a negative and significant relationship between the audit fee and discretionary accruals as a proxy for earnings quality. It supports the hypothesis that a high audit fee can be a proxy for external audit quality, and accordingly, improved earnings quality. It is consistent with Basiruddin (2011), who suggests that higher-quality auditors which either charge higher audit fees are likely to reduce earnings manipulation.

However, regarding the audit fees, Bedard and Johnstone (2004) observed that auditors increase their audit work, audit hours, and billing rates for their clients in terms of risk of earnings manipulation. They also found a positive association between billing rates and risk of earnings manipulation and increased CG risk. Gul et al. (2003) reported a positive relationship between discretionary accruals and audit fees. Antle et al. (2006) found that audit fees cause high abnormal accruals. Besides, Hasnan, Abdul Rahman, and Mahenthiran (2012) provided evidence that there is a positive association between audit fees and fraudulent financial reporting in Malaysia. They suggested that auditors evaluate situations involving both aggressive earnings management and inadequate corporate governance and that there is a relationship between those assessments and auditors' fees.

Since there are some contradictory findings in the studies on the relationship between audit fee and earnings quality, therefore, it is worth considering the audit fee as a characteristic of the external audit mechanism in this study.

(c) External Audit Independence and FRQ

Every auditor should be financially independent of his clients. However, when the audit company has a reliance on a particular client and develops economic bonds with the client, the independence of the auditor will be compromised. The Sarbanes-Oxley Act (SOX Act) of 2002 disallows the auditors from providing non-audit service (NAS) to an audit client. The motive for this law is the belief that the economic connection of the auditor with the client potentially undermines the auditor independence, and then compromise the audit quality. Therefore, consistent with Kinney and Libby (2002), the audit fee (AF) and non-audit fees (NAF) are considered as measures of auditor independence, which influence the audit quality.

Srinidhi and Gul (2007) used accruals to measure FRQ. They found that there is a relationship between the higher NAS fees and lower accrual quality. Some groups documented the advantages obtained from providing NAS: high predictability of the future cash flows, lower information risk (Nam, Brochet, & Ronen, 2012), and improved earnings quality (Koh, Rajgopal, & Srinivasan, 2013). Simunic (1984) argued that providing both audit and non-audit services could cause knowledge overflow, thereby reducing engagement risk and increasing audit quality (Beck & Wu, 2006). Dechow, Ge, and Schrand (2010) stated that providing more non-audit services could enhance the audit quality through increasing the auditor's capability for the detection of earnings management.

Contrary to the argument mentioned above, Habbash (2010) investigated the impact of CG on accounting information quality. He found a negative relationship between the independence of the external auditor and earnings management. Similarly, based on a sample of firms over the period 2000–2004 in the USA, Abdel-Meguid et al. (2011) found that the relationship between abnormal accruals and auditor dependence on the client is significantly positive in the pre-SOX (2000–2001) period but not in the post-SOX (2002–

2004) period before considering the strength of alternative governance mechanisms (a non-audit mechanism). The users of the financial statement may define auditor dependence by the level of providing NAS, which reduce the objectivity of auditor, thus, decreasing the quality of the financial reports (Kinney, Palmrose, & Scholz, 2004). These findings are consistent with Kinney and Libby (2002). They found a positive association between earnings management and a higher proportion of external auditors' non-audit services as a proxy for external audit independence. Similarly, Gore et al. (2001), Frankel et al. (2002), Ferguson, Seow, and Young (2004), Dee, Lulseged, and Nowlin (2006), and Antle et al. (2006) found that there is a relationship between the NAS fees and higher discretionary accruals.

In addition to the accruals, the scholars also utilise restatement as a proxy for low FRQ. Kinney et al. (2004) provided evidence indicating a positive relationship between audit fees, audit-related fees, and unspecified NAS fees, and restatement. Concerning the audit litigation, Schmidt (2012) studied the effect of NAS on auditor independence and concluded that the higher NAS fees increase the likelihood of the litigation for a restatement. Ferguson et al. (2004) used restatement in the UK as a proxy for FRQ. According to their findings, the non-audit services result in low FRQ. Besides, Markelevich and Rosner (2013) demonstrated the positive relationship between the NAS fees and the probability of SEC sanction for fraud.

Nevertheless, some studies found no relationship between the NAS magnitude and abnormal returns for the equity market (Ashbaugh, LaFond, Mayhew, 2003). Al-Rassas and Kamardin (2015b) also suggested that there is no association between the NAS fees and the earnings quality (proxied by abnormal accruals). The scope of the study is limited to the Malaysian Main Market listed companies for a period of study of four years from 2009 to 2012. Similarly, Basiruddin (2011) observed that based on auditor independence,

no evidence is available for suggesting an association between NAS fees and earnings management.

Pursuant external audit studies, this study suggests that there is an association between external audit characteristics and earnings quality. Thus, the views mentioned above lead to the following main hypothesis:

H4: There is a relationship between external audit characteristics and earnings quality.

Based on some characteristics of external audit, this study develops some subsidiary hypotheses as follows:

H4a: There is a relationship between external audit size and earnings quality.

H4b: There is a relationship between external audit fee and earnings quality.

H4c: There is a relationship between external audit independence and earnings quality.

H4d: There is a relationship between external audit quality and earnings quality.

3.3.2 Interaction among Different Corporate Governance Mechanisms and Financial Reporting Quality

This study supports the theoretical framework of Cohen et al. (2004) to determine that appropriate interactions among CG mechanism enhance financial information quality. According to Bhuiyan et al. (2006), the agency problem is and will be there as long as there is the existence of a corporate type of organisation. One may not love it but also cannot leave it. Although various mechanisms of CG can be used to mitigate the agency problem, each control mechanism is not without limitations. Too much emphasis on one mechanism and ignorance of the other would be unwise. It is what gives rise to systemic nature of CG: the whole is more than the sum of parts, and the impact of one part of the system cannot be appropriately appreciated except by taking into consideration its relations with the other constituent parts of the system (Bhuiyan et al., 2006).

Moreover, Bhuiyan et al. (2006) state that some opportunities give rise to complementary and substitution relationships between various governance mechanisms. Mechanisms complement each other if one can reduce the opportunity costs (or raise the benefits) of the other at the margin. They are substitutes if one increases the opportunity costs (or reduce the benefits) of the other. That is why there are specific combinations of mechanisms which reinforce each other in minimising the (sum of the) costs arising from several agency conflicts to be governed in the typical firm, and which therefore fit together better than alternative combinations.

The elements of CG include the audit committee, the external audit, the internal audit, and the board of directors. To secure the governance operations of a firm, the different components or mechanisms of the governance system such as the board of directors, internal auditors, external auditors, financial management, executive management, and investors should cooperate (ECIIA, 2008).

Additionally, based on what was argued in section one of this chapter regarding the interactions that exist between four main mechanisms of CG, no research has been conducted in this area. Hence, this study investigates the association between each paired interaction of those CG mechanisms and qualitative characteristics of earnings. In other words, in examining the relationship between specific CG mechanism and earnings quality, the moderating effect of the alternative mechanisms of CG is also considered. Thus, the following hypotheses are developed.

3.3.2.1 Earnings Quality and Interaction between Board Characteristics and Audit Committee Characteristics

According to Beasley and Salterio (2001), the board significantly affects the audit committee quality in terms of knowledge and independence because it is the board that chooses the audit committee members. They asserted that it is more likely that

independent boards (evidenced by the number of outside members), an independent chair who is not the same as the firm's CEO, and the larger size appoint an audit committee in higher quality. The expectations are supported by their findings, though a weaker relationship was found for audit committee knowledge.

Cohen et al. (2004) stated there appears to be an association between characteristics of the board and the audit committee and the incidences of earnings manipulation and fraud. According to their findings, for the audit committee to perform their responsibility competently in the financial reporting process and monitor the actions of the management effectively, the audit committee must be empowered by the board having real power and adequate expertise.

In the testing of the interaction between board characteristics and audit committee characteristics, Bliss et al. (2007) explained that when CEO duality exists in a company, in the presence of the higher percentage of independent directors on the audit committee, strong CG mechanism can be provided. It finally reduces the risks associated with CEO-dominated boards.

Therefore, this study has found little or no research that integrates these two areas into one conceptual framework. That is why to test the expectation that the audit committee quality can moderate the link between board quality and the earnings quality, the following main hypothesis is developed:

H5: The interaction between board quality and audit committee quality has an influence on earnings quality

3.3.2.2 Earnings Quality and Interaction between Board Characteristics and External Audit Characteristics

Agency literature suggests that board independence from management provides better monitoring of the financial reporting process; thus greater reliability and validity in

accounting reports is expected (Beasley, 1996; Dechow et al., 1996). Therefore, the risk assessments of the auditor are reduced, and fewer audit efforts are needed, resulting in lower audit fees.

However, in contrast to Beasley (1996) and Dechow et al. (1996), O'Sullivan (2000) studied the impact of governance mechanisms (i.e., the characteristics of the board of directors) on audit quality. These researchers applied the external audit fee as a proxy for audit quality. They found a significant relationship between the proportion of independent directors and the audit fees. The findings of both studies suggest that independent directors encourage the appointment of higher quality auditors to provide further assurance to investors that company financial statements are fairly presented. Additionally, Carcello et al. (2002), Yatim et al. (2006), and Basiruddin (2011) found that companies with a strong board (i.e., independent, expert, and diligent board) demand more external monitoring and are related to the higher external audit fees showing higher external audit quality.

In addition, according to the governance guidelines and literature, the ability of the boards to perform its governance role is likely to weaken when the board chair and the CEO are the same (Fama & Jensen, 1983a, b; The Cadbury Committee, 1992; Dechow et al., 1996; the Malaysian Code on Corporate Governance, 2001). For example, Dechow et al. (1996) indicated that it is more likely that the companies recognised as the earnings manipulators have the same CEO and board chair. It implies that the combination of these roles probably compromises the board effectiveness in monitoring the financial accounting process and the management. Hence, the auditor should show more audit efforts, which charges higher audit fees.

Lipton and Lorsch (1992) and Jensen (1993) contended that due to the difficulties in organisation and cooperation with a large number of directors, there is a negative relationship between the board size and the board's capability for advising and

engagement in long-term strategic projects. As a result, the board size likely influences the financial reporting process, and thus it can affect the audit process. If larger boards monitor the financial reporting process less effectively (Beasley, 1996), then the external auditor of the company evaluates the control environment as weak. Therefore, more audit efforts are needed leading to higher external audit fees.

Prior studies show that few scholars drew attention to the interaction effect between the board of directors and external audit in a relationship with earnings quality. Thus, the following hypothesis is worth to develop.

H6: The interaction between board quality and external audit quality has an influence on earnings quality

3.3.2.3 Earnings Quality and Interaction between Internal Audit Characteristics and Audit Committee Characteristics

The audit committee and the IAF are considered as two fundamental dimensions of the CG mosaic attracting considerable attention in recent decades. Gramling et al. (2004) and Cohen et al. (2004) recently reviewed the governance role of the IAF and audit committee in the organisations. They particularly called for more research to determine the audit processes as well as organisational factors which make the relationships between IAF and audit committee more effective. Such belief is crucial because it is expected that a more effective association between the IAF and audit committees enhances the financial reporting quality and associated governance processes in the corporations (Gramling et al., 2004). The audit committee and internal audit importantly play the role as the internal control mechanisms of the company for ensuring the financial reporting reliability (Carcello et al., 2002).

According to the previous studies, an effective audit committee strengthens the IAF status. In turn, the IAF helps the audit committee in ensuring the quality of the report

prepared by the management (Raghunandan & McHugh, 1994; Beasley et al., 2000). The studies also indicate that the IAF can have potential interaction with audit committees for overseeing the management and improving FRQ (Scarbrough et al., 1998; Raghunandan et al., 2001; Goodwin & Yeo, 2001; Goodwin, 2003). Previous studies in this regard have supported the claim that the information asymmetry between audit committees and the firm management is decreased when there is the interaction between the audit committee and internal audit function without detailing these interactions (Scarbrough et al., 1998; Bishop et al., 2000; Raghunandan et al., 2001; Sarens, De Beelde, & Everaert 2009).

The BRC pursued the leads of the Treadway Commission (1987) in identifying the critical role of internal auditing which plays in the financial reporting process and CG, and in helping the audit committee to discharge its responsibilities effectively and to ensure the quality of financial reporting and auditing (MCCG, 2012; Carcello et al., 2002).

Sarens et al. (2012) suggested that internal audit effectiveness depends on its interactions with other CG mechanisms, as proposed by Goodwin (2003) and Ratcliffe (2009). Sarens et al. (2009) show that the audit committee and the IAF have complementary roles within CG. It is consistent with the results of Rezaee and Lander (1993) and Anderson (2009), who stated that internal audit's interaction with the audit committee positively influences the internal audit's responsibility in CG.

The reviewed literature showed that prior studies examining the interaction effect between the audit committee and internal audit effectiveness have mainly concentrated on the composition of the audit committee (Scarbrough et al., 1998; Goodwin & Yeo, 2001; Raghunandan et al., 2001). The evidence mostly suggests that there is more significant interaction between the internal auditors and the audit committees, which have a higher independence level and more members with financial expertise. For instance, the audit committees that have a higher level of independence tend to hold longer, private,

and frequent meetings with the heads of IAF. They are more willing to perform more detailed reviews of the internal audit program and its results compared to the audit committees with a lower level of independence (Scarborough et al., 1998; Goodwin & Yeo, 2001; Raghunandan et al., 2001).

Although the role of the audit committee and internal audit as the firm's internal corporate mechanism is highly significant to secure the reliability and quality of financial reporting, empirical research related to the interaction between audit committees and internal auditors remains limited. Therefore the next hypothesis is developed.

H7: The interaction between Audit Committee quality and Internal Audit quality has an influence on earnings quality

3.3.2.4 Earnings Quality and Interaction between External Audit Characteristics and Audit Committee Characteristics

Previous studies have treated audit committees and external auditors as independent monitoring mechanisms as they relate to earnings management (Dechow et al., 1996; Becker et al., 1998; Francis and Schipper, 1999; Abdul Rahman & Ali, 2006; Baxter & Cotter, 2009; Chi et al., 2011; Chiang et al., 2011; Sun et al., 2011). However, both monitoring mechanisms are regarded as a part of the whole CG structure of the company. Therefore, it is not probable that they operate independently within the corporate structure (Alves, 2013).

DeZoort and Salterio (2001) posit that audit committee members with more experience are more likely to perceive and sympathise with the risks the external auditor encounters. Abbott et al. (2003) maintained that the audit committee members with such expertise could better perceive the auditing risks, issues, and audit procedures proposed to identify these risks and issues. Thus, a positive relationship between the audit fees and audit committee expertise is expected. Zaman, Hudaib, and Haniffa (2011) found that when the

characteristics of the board of director are controlled, a significant positive relationship was observed between the audit committee expertise and audit fees just for larger clients. Their findings suggest that effective audit committees engage in more monitoring leading to a more extensive audit scope and higher audit fees.

However, Cohen et al. (2002) observed that auditors are less likely to refer a complex auditing issue to an audit committee that is perceived as not being knowledgeable about the technical auditing and financial reporting matters involved. It implies that the audit committee expertise decreases the auditors' risk assessments related to the financial reporting process, which lead to lower external audit fees.

Moreover, Yatim et al. (2006) stated that an independent audit committee (relative to insider-dominated audit committees) is better able to protect the reliability of the accounting process and promote objectivity on the part of the audit committee. It improves the internal controls and reduces the inherent and control risk. Therefore, the company would need less substantive testing leading to lower external audit fees.

However, according to Abbott et al. (2003), an independent audit committee may require an extended scope of audit for avoiding financial misstatement and protecting the reputational capital. It suggests that independent audit committee directors demand additional audit procedures and higher levels of audit assurance and potentially provide stronger support for auditors during scope negotiations with management.

Concerning the audit committee meeting, Abbot et al. (2003) found that companies are less likely to restate their audited financial statements when their audit committees meet at least four times per year. They suggested that the audit committee that has frequent meetings is expected to be informed of current auditing issues and more diligent in the discharge of their duties. It suggests that audit committees with higher meeting frequency can eagerly and positively affect the audit coverage during the different audit stages, and it is positively related to the audit fees.

Moreover, Goodwin-Stewart and Kent (2006) reported that there is a positive relationship between the level of audit fees and the presence of an audit committee. Their findings also showed a positive association between the audit fees and the audit committee meeting frequency. However, they did not observe a significant relationship between audit fees and independence or expertise of the audit committee.

In this regard, Alves in 2013 studied how the audit committee and external audit interacted to influence the earnings quality. The results of this study seem to propose that the existence of an audit committee and external audit independently do not have effective monitoring on earnings management in the listed companies of Portugal. However, audit committee existence and external audit jointly reduce earnings management. Notably, the result indicates that the existence of an audit committee and external audit have a joint effect on enhancing earnings quality.

Finally, it is more probable that in order to constrain earnings management and increase earnings quality, monitoring mechanisms including audit committee and external audit perform jointly. Thus, the following hypothesis is expected.

H8: The interaction between audit committee quality and external audit quality has an influence on earnings quality

3.3.2.5 Earnings Quality and Interaction between Internal Audit Characteristics and External Audit Characteristics

The external auditor crucially plays a role in helping FRQ promotion (Cohen et al., 2004). The auditors can effectively monitor the highly aggressive managers by diminishing the excessive earnings management techniques like unpredicted discretionary accruals. Internal auditors perform the same type of work, and their goals are often similar to the goals of external auditors (Krishnamoorthy, 2002). Considering today's CG requirements, the relationship between internal and external audit has taken

a more outstanding role (Ratcliffe, 2003) in the search for the quality of reports prepared by management.

In this regard, some researchers analyse how the relationship between internal and external auditors can influence the quality of financial reporting (Maletta, 1993; Krishnamoorthy, 2002) and other studies have reported that the nature and extent of external audit work are affected by the IAF engagement in the financial statement audit (Gramling, 1999; Felix & Gramling, 2001).

Despite the distinctive roles of the external and internal auditors, it is mostly suggested that the coordination of two functions can provide total audit coverage more efficiently and effectively (IIA, 1995; Engle, 1999). Studies like those conducted by Maletta (1993), Felix and Gramling (2001), Gramling (1999), and Krishnamoorthy (2002) have indicated that a high level of coordination and cooperation between external and internal audit can enhance the external audit efficiency and effectiveness, resulting in the enhanced quality of financial information. Also, the interaction between the external and internal audit crucially influences the effective governance and achievement of high-quality financial reporting (SOX Act, 2002). Grass-Gil et al. (2012) indicated that when the relationship between the internal audit and external audit is greater, with more frequent meetings and higher collaboration in providing the annual audit, banks have higher-quality financial reporting. Felix and Gramling (2001), Gramling (1999), Maletta (1993), and Krishnamoorthy (2002) reached similar findings.

Proponents of substitution perspective like Felix and Gramling (2001) and Prawitt et al. (2012) reported a negative relationship between external audit fees and the internal audit contribution to the external audit (external auditors' dependence on IAF). Their findings suggest that internal audit can be considered partly as a substitute for an external audit, with a reduction in audit fee being apparent when the external auditor relies on the internal audit work. Mat Zain, Zaman, and Mohamed (2015) reached the same conclusion

in Malaysia, which implies that in the case of external auditors' reliance on the work of internal audit, the companies would pay lower audit fees.

On the contrary, the findings by Felix and Gramling (2001), Carey, Craswell, and Simnett (2000) did not observe a significant relationship between audit fees and the external auditor's assessment of the internal audit contribution level. Moreover, the research focusing just on the use of internal audit quality instead of the IAF contribution to external audit found a positive relationship between audit fees and the presence of an IAF (Carey et al., 2000; Brody & Lowe, 2000; Goodwin-Stewart & Kent, 2006; Hay, Knechel, & Ling, 2008). These findings provide support for the complementary perspective or joint effect, implying that entities may consider the internal and external audit as complementary means enhancing the overall level of monitoring. The latest perspective is consistent with a more extended internal audit role, which recently has taken out of a narrow focus on control to include the CG and risk management (Mat Zain et al., 2015).

Thus, while there may be some substitution of internal audit for external audit work, the internal audit function is unlikely to be restricted to activities directly related to the external audit. It is expected therefore that the level of internal auditing is positively related to audit fees because those firms that are more committed to strong corporate governance are likely to engage in higher levels of internal auditing as well as being prepared to pay for a higher quality external audit (Goodwin-Stewart & Kent, 2006).

Due to the different point of views in literature, this study hopes to document the significance of attention to the interactions between internal and external auditing mechanisms in studying the relationships between corporate governance and earnings quality. Thus, the following hypothesis is suggested.

H9: The interaction between external audit quality and internal audit quality has an influence on earnings quality

3.3.2.6 Earnings Quality and Interaction between Internal Audit Characteristics and Board Characteristics

Concerning the interaction between internal audit and board of directors, Johl et al. (2013) explore the association between internal audit quality (and its components) and abnormal accruals, as a proxy for financial reporting quality. They also investigated the moderating role of the board on this association. Using a unique dataset of survey responses and archival data from a developing nation where certain corporations are politically influenced, they test their prediction that internal audit quality (and its components) is related to increased financial reporting quality. They also revealed that this relationship is affected by the quality of the board. They also investigated the influence of the board quality on this relationship. They developed the study of Prawitt et al. (2009) and tested the relationship in an emerging economy with significant institutional differences in comparison to the USA. They included the companies with outsourced IAF entirely or partially and improved the measures of two characteristics of internal audit quality like quality control assurance and internal audit organisational independence. They also tested the moderating impact of board quality as an essential internal governance mechanism.

They find that although the lower ordered variables board quality and internal audit quality coefficients are negatively related to abnormal accruals, the interaction variable between these two variables is positively associated with abnormal accruals, indicating a substitution relationship exists between board quality and internal audit quality. These results suggest the possibility that internal audit quality and board quality can be substituted for one another to maintain the level of FRQ. Their findings show that specific internal audit attributes play an important governance role in the financial reporting process, and synergies can be formed between the board of directors and the IAF. Then,

the last main hypothesis is expected to extend the study of Johl et al. (2013), particularly in the different aspects of earnings quality.

H10: The interaction between internal audit quality and board quality has an influence on earnings quality

3.4 Summary of the Chapter

This study used the agency theory and resource dependence theory as the main theories to examine the relationship between CG and earnings quality. Finding how CG mechanisms are described from the aspect of each theory is one of the aims of reviewing these theories. Finally, the chapter reviews the relationship between CG characteristics and earnings quality. Additionally, the effect of interaction between CG mechanisms on earnings quality is investigated in this chapter. More importantly, based on the existing gap in the literature, all hypotheses of this study are developed in this chapter.

CHAPTER 4: RESEARCH METHOD AND RESEARCH DESIGN

4.1 Introduction

Chapter 4 provides the research frameworks and hypotheses of this study. This chapter not only describes the research philosophy and approach, but also it explains the data collection process, the sample determination, the definition and measurement of the variables, the development of the models, and the data analysis for hypothesis testing. The quantitative approach by using secondary data was applied for achieving the research objectives. The organisation of this chapter is as follows: Section 4.2 describes the research philosophy. Section 4.3 discusses the research methodology. In Section 4.4, the measurement of the construct is described. Section 4.5 illustrates the research framework. In Section 4.6, hypotheses and models of this study are developed and specified. Figures of research models are introduced in Section 4.7. Description of data, sample, and panel data are mentioned in Section 4.8 and 4.9, respectively. Section 4.10 summarises hypotheses and models in a table. Section 4.11 discusses various secondary data analysis procedures. In the final section, this study summarises the discussions in this chapter.

4.2 Research Philosophy

Research involves a complex process and is complicated by different expectations. Considering such complexity, raising different beliefs concerning research methods and expected results by the researchers are not surprising (Krauss, 2005). Three paradigms classify these different beliefs, including positivist, critical, and interpretivist research (Krauss, 2005). According to Burrell and Morgan (2017), the researchers must adopt the correct paradigm for their study. In the social sciences, the critical matter of any research is the philosophical assumption. The positivist paradigm is selected in the current study where the hypotheses are created according to the concept of the effect of corporate governance on the earnings quality that can be investigated and empirically examined using the analysis tools of the research and the theoretical conjectures (Krauss, 2005).

As stated by Burrell and Morgan (2017), the positivists attempt to provide explanations for the events occurring in the social world, which is achieved by inquiring regularities and causal relationships between its constituents. Saunders, Lewis, and Thornhill (2009) affirmed that deduction is linked to positivism, and fulfils the need to describe the casual association between or among variables and the need to generalize a conclusion.

Consequently, the current study has a deductive nature rather than an inductive nature because of the following reasons (Saunders et al., 2009):

- It seems that the information is provided by the scientific principles instead of acquiring further insight into the human-made meanings associated with the events.
- This approach is mostly employed to test the hypotheses, not for constructing a new theory.
- The casual associations amongst the variables are specified by this approach rather than analysing the context of the context.
- The quantitative data is used.
- The deductive approach is well-organised compared to the inductive approach.
- The researcher is independent in this approach, as the main reliance of this study is on the analytical procedures rather than relying on the others' experiences and opinions.
- If there exists an adequate sample size in positivist paradigm, it is possible to generalise, as another researcher can carry out the same research, in the same way, obtaining comparable outcomes (Darke, Shanks, & Broadbent, 1998).

Following sequential steps should be run if this approach is adopted (Robson, 1999):

- The hypotheses about the relationship among variables should be developed by relying on well-defined theory;

- The way of testing the hypotheses and measuring the variables should be clarified by expressing them operationally;
- The mentioned operational hypotheses should be examined by the adoption of a particular strategy. Current work is using an empirical research strategy since its purpose is to dedicate the causal relationship among variables;
- The certain result of an inquiry should be tested. Then, it finally confirms the theory or exposes the necessity for particular modification in the light of empirical results.

Burrell and Morgan (2017) recommend that deductive research is a part of the functionalist paradigm, in which the regulations govern the population, and the epistemology utilises much objective positivism. The research objectives are constructed based on the concept that the effect of CG on the earnings quality can be empirically investigated and tested using the tools of the research analysis. Accordingly, phenomena occurrence is specified by deducting the law of occurrence using positivism, which eventually explains the causal relationship among variables of the study, as well as identifying predictable relationships explaining the occurrence of phenomena in replicable scenarios. By hypothesis development and designing a research strategy for hypothesis testing, this objective can be achieved (Saunders et al., 2009).

In summary, this work follows a positivistic viewpoint and deductive approach using quantitative techniques. Because, according to the research philosophy, this study does not attempt to generate a new theory. However, based on quantitative data analysis, this thesis seeks to examine existing hypotheses to prove existing theories.

4.3 Research Methodology

It was observed by Punch (1998) that the establishment of the proper research approach or paradigm regarding the research issues is crucial. Therefore, there should be

a match between the methodology and the particular paradigm (Krauss, 2005). The researchers often apply two types of research methodology, i.e., qualitative and quantitative research methods. The qualitative method provides a descriptive and non-numerical approach for data collection so that the phenomenon can be understood (Berg, 2004). Babbie (2012) contended that the qualitative method has a flexible and active nature that can study subtle differences in the behaviours and attitudes for the examination of the social processes over time. On the other hand, Bryman (2012) and Berg (2004) identified that the quantitative approach adopts various types of statistical analysis, and more robust measurements, higher reliability, and capacity for generalisation are provided. Also, Berg (2004) mentioned that quantitative methods could deal with long periods with a large number of samples. Thus, the capacity for generalisation is enhanced. Some scholars utilise a combination of two methods so that better outcomes and explanations are achieved. Nevertheless, the qualitative approach has some deficiencies. Firstly, the sample size is small; thus, it would not be representative of the entire population (Hakim, 1987). Secondly, there is low reliability and transparency in qualitative methods (Berg, 2004). Thirdly, qualitative approaches require long periods. It can cause inefficient means for obtaining adequate explanations (Berg, 2004).

Hence, since getting data through the interviews from different firms is difficult, and taking the response from these firms is hard, current research adopted the deductive positivism approach. In this approach, the pre-existing theoretical basis is identified and relied upon in developing the hypotheses. Positivist researchers often employ quantitative data (Darke et al., 1998; Krauss, 2005). In this paradigm, researchers construct hypotheses. Then, they attempt to disprove these assumed relationships by concentrating on the null hypotheses with data being collected using quantitative data and analysed using statistical methods (Krauss, 2005). Finally, the empirical findings indicate confirmation or rejection of the tested hypotheses.

To achieve this objective, this study used the regressions as the main tool of analysis, in which the researcher pursues the positivist understanding of the conduct of methodological process that is unaffected by individual perceptual differences (Ardalan, 2012). Hair, Black, Babin, and Anderson. (2010) stated that the appropriate method of analysis when the research problem involves a single metric variable presumed to be related to two or more independent variables. Thus, the dominant analysis tool employed in the current research is the multiple regression analysis. Multiple regression model is one of the over-used analysis methods utilised by previous research (e.g., Velury & Jenkins, 2006; Mashayekhi & Bazaz 2010; Al-Dhamari & Ku Ismail, 2013; Johl et al., 2013) to study the relationship between the mechanisms of the corporate governance and earnings quality.

4.4 Measurement of Construct

4.4.1 Corporate Governance Mechanisms as Independent Variables

4.4.1.1 Corporate Governance Characteristics

This Study utilises some corporate governance characteristics as independent variables. Table 4.1 shows the definition of those characteristics.

Table 4.1: Measurement of Corporate Governance Characteristics

Corporate Governance Mechanisms	CG Characteristics	Symbol	Measurement of Construct
Board of directors	Board Size	BODSIZE	The number of members constituting the board
	Board Independence	BODIND	The percentage of external (non-executive /independence) directors on the board;
	Non-CEO Duality	Non-CEO	The board directors' chairman does not occupy the position of chief executive officer
	Frequency of Board Meeting	BODMEET	The number of board's meeting per year
Vafeas (2000), Xie et al (2003), Yatim et al. (2006), Ahmed (2006), Petra (2007), Dimitropoulos & Asteriou (2010), Mashayekhi & (2010), Rusmin (2011), Alkdai & Hanefah(2012), Ogeh Fiador (2013), MCCG (2012), Alves (2013)			
Audit Committee	Audit Committee Size	ACSIZE	The number of directors on the audit committee
	Audit Committee Independence	ACIND	The percentage of independent directors on the audit committee
	Audit Committee Financial Expertise	ACEXP	The percentage of audit committee's members who have financial expertise on audit committee (expertise is defined as being a member of MIA)
	Audit Committee Frequency of Meeting	ACMEET	The number of audit committee meeting per year
Xie et al. (2001), Li et al. (2008), Rusmin (2011), MCCG (2012), Al-Rassas and Kamardin (2015b)			
External Audit	Audit Firm Size	EASIZE	Big 4 auditor firm or Non-Big 4 auditor firm
	Audit Fee	EAFEE	The fees are paid to audit firm for audit services
	Audit Independence	EAIND	The percent of audit fees are paid to the auditor (for audit services) to total fees (for audit and non-audit services)
Yatim et al. (2006), Bliss et al. (2011), Abdel-Meguid et al. (2011), Yassin and Nelson (2012), MCCG (2012)			
Internal Audit	IAF Experience	IAEXP	The number of the years since the date of IAF's establishment
	IAF Independence	IAIND	The way of IAF's establishment (outsource or in-house)
Davidson et al. (2005), Prawitt et al. (2009), Johl et al. (2013), MCCG (2012)			

4.4.1.2 Quality of CG Mechanisms

The quality of each CG mechanism is measured by a composite score. The measurement method of the composite score is described in Table 4.2.

Table 4.2: Measurement of the Quality of CG Mechanisms by Composite Score

Quality of CG Mechanisms	Components	Measurement of each component
Board Quality: a composite measure, ranges between 0 and 4 with 0 indicating lowest quality and 4 highest quality (Hoitash et al., 2009; Johl et al., 2013)	BODIND	A value of 1 is given if at least 2 directors or 1/3 of the board of the directors are independent non-executive directors, 0 otherwise
	Non-CEO	A value of 1 is given if the position of chairman and CEO are held by different individuals and 0 otherwise
	BODSIZE	A value of 1 is given if the number of members in the board is higher than the median value, 0 otherwise
	BODMEET	A value of 1 is given if the number of board meetings is higher than the median value, 0 otherwise
Audit Committee Quality: a composite measure, ranges between 0 and 4 with 0 indicating lowest quality and 4 highest quality (Prawitt et al., 2009; Baxter & Cotter, 2009; Baxter, 2010; Dellaportas et al., 2012)	ACSIZE	A value of 1 is given if the number of AC members is equal and higher than 3, and 0 otherwise.
	ACIND	A value of 1 is given if the proportion of AC independence is higher than 0.5, and 0 otherwise
	ACEXP	A value of 1 is given if the number of financial expert members on AC is equal and higher than 1, and 0 otherwise
	ACMEET	A value of 1 is given if the number of the meeting is equal or higher than 4, and 0 otherwise
Internal Audit Quality: a composite measure, ranges between 0 and 2 with 0 indicating the lowest quality and 2 highest quality (Johl et al., 2013; Prawitt et al., 2009)	IAEXP	A value of 1 is given if a number of years since the year of IAF establishment are above the median, and 0 otherwise
	IAIND	A value of 1 is given if the IA function is outsourced, and 0 if it is run in-house.
External Audi Quality: a composite measure, ranges between 0 and 3 with 0 indicating the lowest quality and 3 highest quality (Alshammari, 2014)	EASIZE	A value of 1 is given if the firm is Big4, and otherwise 0.
	EAFEE	A value of 1 is given if of Audit Fee is higher than the median, and otherwise 0.
	EAIND	A value of 1 is given if the ratio of audit fee to total audit fees is more than 50 %, and otherwise 0.

4.4.1.3 Interaction between CG mechanisms

Based on the literature, the interaction between two independent variables in a regression model means the moderating role of one of the independent variables on the association between alternative independent variables and the dependent variable (Bliss et al., 2007; Alves, 2013; Johl et al., 2013). Accordingly, to capture the interaction between two constructs in a model, statistically, multiplication is done between them (Alves, 2013). Table 4.3 shows the interaction between CG mechanisms. Moreover, as explained in section 4.4.1.2, this study uses the composite score to measure the quality of

each construct which is utilised in an interaction model, (Hoitash, Hoitash, & Bedard, 2009; Prawitt et al., 2009; Dellaportas, 2012; Baber et al., 2012; Johl et al., 2013).

Table 4.3: Measurement of Interaction between CG Mechanisms

Interaction between CG Mechanisms	Symbol (multiplication between two mechanisms)
Board of directors and Audit Committee	BODQ*ACQ
Board of directors and Internal Audit	BODQ*IAQ
Board of directors and External Audit	BODQ*EAQ
Audit Committee and Internal Audit	ACQ*IAQ
Audit Committee and External Audit	ACQ*EAQ
Internal Audit and External Audit	IAQ*EAQ
References: Cohen et al. (2004), Bhuiyan et al. (2006), Bliss et al. (2007), Guo (2011), Baber et al. (2012), Alves (2013), Johl et al. (2013)	

4.4.2 Measurements of Earnings Quality as Dependent Variables

4.4.2.1 Relevance

If financial accounting information can assist the users in making economic decisions to evaluate past, present and future events, it is considered as relevant. This accounting information should have verifiability and predictability (IASB/FASB, 2010). Relevant financial information can create a difference in the users' decisions making. When financial information has predictive value (PV), confirmatory value/feedback value (CV/FV), or both, it has the capability of creating a difference in decisions.

According to Li (2009), CG has a positive relationship with the relevance of earnings because investors believe that companies with strong CG provide more useful earnings numbers for the users in their decision-making. Thus, this study considers relevance as an attribute of earnings quality. Relevance is measured by two components, namely predictive value (PV), confirmatory value/feedback value (CV/FV).

(a) **Predictive Value**

Financial information has predictive value if it can be used as an input to processes employed by users in making their own predictions. Thus, based on FASB/IASB's definition, this study follows Barth et al. (2001b), Eng et al. (2005), Barua (2006), Velury and Jenkins (2006), Al-Dhamari and Ku Ismail (2013), and Mollah et al. (2019) to measure the predictive ability of earnings appropriately. This study uses the following regression equation in which current earnings predict future cash flow (see Chapter 2, Section 2.3.6.3).

$$OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t} + e_t$$

Where,

5. $OCF_{i,t+1}$: Future Cash flow from the operation of firm i (scaled by average total assets) at the end of year t+1
6. $EARN_{i,t}$: Operating income before extraordinary item and discontinued operations scaled by average total assets
7. e_t : Error term.
8. Both OCF_{t+1} and E_t are deflated by average total assets for year t.

(b) **Feedback Value/ Confirmatory Value (FV/CV)**

The information has FV (CV) if it changes or confirms past (or present) expectations concerning the prior evaluations (FASB/IASB, 2010). Thus, according to Barua (2006), Mahmud et al. (2009) and Mehri et al. (2013), the following model is used to measure FV (CV) of earnings (see Chapter 2, Section 2.3.6.3).

$$FV_{it} = [PEB_{i,t+1}] - [PEA_{i,t+1}]$$

Where:

FV_{it} : FV (CV) of earnings of firm i in year t

$PEB_{i,t+1}$: Prediction error of next year's earnings without considering current earnings of firm i in year $t+1$

$PEA_{i,t+1}$: Prediction error of next year's earnings after considering current earnings of firm i in year $t+1$

4.4.2.2 Faithfull Representation

The economic phenomena are represented in words and numbers by the financial reports. To be useful, financial information not only must represent relevant phenomena, but it also must faithfully represent the phenomena that it purports to represent. To be a perfectly faithful representation, a depiction would have three characteristics. It should be complete, free from error, and neutral (FASB 2010, QC 12). The perfectness of accounting information is based on a specific account. This feature and being free from error both do not gain support from the literature. Thus, current research uses neutrality to operationalise the faithful representation of earnings appropriately based on the FASB/IASB conceptual framework. If managers present earnings report faithfully, the unbiased earnings number would be obtained (neutral). In other words, if the management manipulates the earnings, the earnings number would be biased and not neutral. In this regard, Krismiaji et al. (2016) argue that the shareholders can acquire useful information from earnings management for the assessment of faithful representation. They state that firms with less engagement in earnings management are more likely to present more reliable accounting earnings. They evaluate earnings management by testing the magnitude of abnormal accrual. Therefore, this study uses abnormal accrual model or Modified Jones Model (Dechow et al., 1995) to measure neutrality as a component of faithful representation (see Chapter 2, Section 2.3.6.3).

$$ABNAC = \text{Actual accruals} - \text{Expected accruals}$$

4.4.3 Control Variables

This study addresses some control variables to explain the variation of financial reporting quality. Different studies used different control variables. As shown below, control variables that have been used in this study consist of firm size, firm growth, and annual effect dummies since previous studies document that these variables indicate firm specific factors known to be associated with earnings quality (Vafeas, 2000; Beekes et al., 2004; Ahmed et al., 2006). Although this study accepts that other relevant control variables may exist, there is no specific pattern for the control variables in the previous literature. Therefore, by following different studies, it is a usual method to include the above as control variables.

4.4.3.1 Firm Size

This study controls for firm size since it is identified in the prior literature as being related to the level of earnings management. Klai and Omri (2011) state that the firm size is related to the poor quality of financial information. It can be stated by the fact that the firm size raises its operating risk. It leads the executives to exercise accounting discretion to mislead the shareholders. Inconsistent with the presumption that the larger companies show more earnings management and then low-quality earnings (Burgstahler & Dichev, 1997; Klai & Omri, 2011), Mashayekhi and Bazaz (2010) demonstrate that firm size does not have a negative influence on earnings quality.

Contrary to previous research, Pathirawasam (2010) conducted the effect of CG mechanisms and firm size on the value relevance of accounting information. The result of his study shows that effective corporate governance practices and firm size are positively associated with a better quality of accounting information. In other words, he argues that the value relevance of financial information of small firms may be lower than large firms. Although empirical findings on this matter provide complicated results (Bae

&Jeong, 2007; Brimble & Hodgson, 2007), it is expected that firm size influence financial reporting quality. Thus, the firm size is adopted in this study as a control variable. It is measured by the logarithm of the book value of the firm's assets.

$$Size_{it} = \text{Log} (ASSET BV_{it})$$

4.4.3.2 Firm Growth

Consistent with a number of earlier studies (Beasley, 1996; Abbott, Park, & Parker, 2000; Abbott et al., 2004; Dimitropoulos & Asteriou, 2010), the current research regards firm growth as a control variable because it is identified in prior literature as being associated with the extent of earnings management and earnings quality. It is essential to control for a firm's pace of development because, in times of rapid growth, a company may experience pressure to maintain or exceed anticipated growth rates. The pressure to achieve a targeted rate of growth, or alternatively to mask downturns, may create an incentive for management to engage in earnings management (Carcello & Nagy, 2004).

Furthermore, Abdul Rahman and Ali (2006) document that when the firm overgrows, executives are more likely to be encouraged to manipulate earnings to acquire better financing conditions. Abdel-Meguid et al. (2011) state that firms are experiencing unusual growth or changes in assets may cause the model's misspecification. That is why firm growth (asset growth) should be controlled in such studies. According to Abbott et al. (2000), Velury and Jenkins (2006), and Abdel-Meguid et al. (2011), growth is defined as the percentage of the change in total assets from the prior year. Thus, this study uses this definition of growth as a control variable.

4.4.3.3 Annual Effect

According to various research findings, the practices of the corporate governance and the profitability of the firms change over time during the economic boom and recession

periods. For instance, Chang and Sun (2009), An (2009), S. Ahmed (2013), Hermalin and Weisbach (2012), Habib and Jiang (2015), and Siniah (2015) contended that the financial performance and the financial reporting quality in all firms are affected by the global financial crisis around the world. Similarly, the macro environment changes, including government regulations and tax policies, can influence the structure of CG and financial performance (Padgett & Shabbir, 2005). As described in chapter 2 and summarised by Figure 2.2, Malaysia has witnessed various economic and financial reforms. It has chosen and followed legislation for creating motivation and initiative accountability and transparency in the country so that a safe financial environment is created for the local as well as foreign investors. Hence, these changes and improvements of legislation are positively expected to influence the financial reporting quality, especially earnings quality. The current research examines the impact of firm growth on earnings quality by employing year dummy variables. Value of every dummy variable equals to one for every year. Otherwise, it is zero.

4.5 Research Framework

Relevance (PV and FV) and faithful representation as two measures of financial accounting information quality are investigated in this study.

All following characteristics would be investigated as indicators of CG: Ratio of non-executive directors on the board of directors, the duality of the responsibilities of the managing director and chairman of the board, board size and the number of the board meeting are four characteristics of boards. The quality of the audit committee's oversight responsibility could be affected by some characteristics such as independence of the audit committee's members, audit committee size, financial literacy, and expertise of audit committee's members, and the number of audit committee meeting per year. The experience and independence of internal auditing are two elements of the internal audit

function. Additionally, the quality of external auditing can be influenced by the auditor firm size, audit fees, and audit independence. Therefore, the research framework of this study is shown in Figure 4.1.

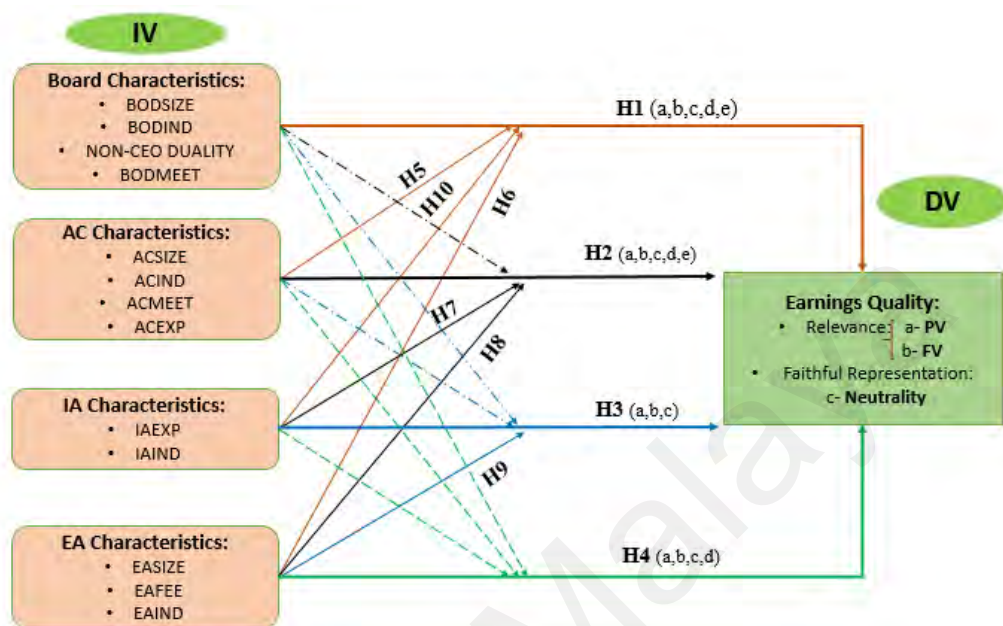


Figure 4.1: Research Framework of the Study

4.6 Development of Hypothesis and Models Specification

According to primary qualitative characteristics of earnings (predictive value, confirmatory value/feedback value and representational faithfulness) defined by FASB/IASB (2010), this study develops some models (P, F, N) to test the relationship between some corporate governance characteristics and earnings quality.

Three main groups of models namely PV model (P), FV model (F) and neutrality model (N) (totally 42 models) are developed to test all hypotheses (totally 23 hypotheses) to answer two research questions concerning the relationship between some corporate governance characteristics and earnings quality as well as regarding the influence of interaction between corporate governance mechanisms and earnings quality. As discussed in chapter 3, this study develops all hypotheses as follows.

4.6.1 Hypothesis 1: There is a relationship between board characteristics and earnings quality

According to some characteristics of the board of directors, some subsidiary hypotheses are proposed by this study as follows:

H1a: There is a relationship between board size and earnings quality.

H1b: There is a relationship between board independence and earnings quality.

H1c: There is a relationship between non-CEO duality and earnings quality.

H1d: There is a relationship between the frequency of board meetings and earnings quality.

H1e: There is a relationship between board quality and earnings quality.

Based on how to measure earnings quality, some models are developed as follows to test hypotheses mentioned above.

4.6.1.1 Predictive Value Model (Model P)

Predictive value is a component of relevance which is one of the fundamental qualitative characteristics of earnings or attributes of earnings quality. To measure earnings quality, predictive value or the predictive ability of earnings is evaluated by a regression equation (see Chapter 2, Section 2.3.6.3) in which future cash flows is regressed on the current earnings (future cash flows-current earnings relation) (Barth et al., 2001b; Eng et al., 2005; Barua, 2006; Velury & Jenkins, 2006; Al-Dhamari & Ku Ismail, 2013; Mollah et al., 2019).

Accordingly, this study suggests that there is a relationship between board size, the number of independent non-executive directors on the board, non-CEO duality, and frequency of the board meeting (as some characteristics of the board of directors) and the predictive ability of earnings. Then, Model P.1.1 is developed to test H1a: H1d. In this

model, the future cash flow-current earning relation is regressed on the board characteristics as follows:

(a) **Model (P.1.1)**

$$OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * BODSIZE_{i,t} + \pi_3 EARN_{i,t} * BODIND_{i,t} + \pi_4 EARN_{i,t} * Non - CEO_{i,t} + \pi_5 EARN_{i,t} * BODMEET_{i,t} + \pi_6 EARN_{i,t} * SIZE_{i,t} + \pi_7 EARN_{i,t} * GWTH_{i,t} + \pi_8 YEAR_{i,t} + \varepsilon_{i,t}$$

Where,

1. $OCF_{i,t+1}$, Future Cash flow from the operation of firm i (scaled by the average total assets) at the end of year t+1. This study scale this variable by the average total assets to account for differences in firm size.
2. $EARN_{it}$, Operating income before extraordinary item and discontinued operations (scaled by the average total assets). This study also scales this variable by the average total assets to account for differences in firm size.
3. Board Size (BODSIZE) refers to the number of members constituting the board.
4. Board Independence (BODIND) is defined as the percentage of external (independence) directors on the board.
5. Non-CEO is a proxy for Non-CEO duality, which is a dummy is taking a value of 1 if the CEO does not occupy the board chair and 0 otherwise.
6. Board's Frequency of Meeting (BODMEET) refers to the number of the board meeting.
7. SIZE is a proxy for firm size, which is equivalent to the logarithm of the book value of assets of the company
8. GWTH is a proxy for firm growth, which is defined as the percentage change in total assets
9. YEAR, dummy variable value is equal to 1 for every year and 0 otherwise.
10. ε_t , It is the error term.

Additionally, this study suggests that there is an association between board quality and PV of earnings. In this way, the future cash flow-current earning relation is regressed on

the board quality in a separate model. Then, Model P.1.2 is developed to test H1e such as follows:

(b) Model (P.1.2)

$$OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * BODQ_{i,t} + \pi_3 EARN_{i,t} * SIZE_{i,t} + \pi_4 EARN_{i,t} * GWTH_{i,t} + \pi_5 YEAR_{i,t} + \varepsilon_{i,t}$$

Where,

1. BODQ = Board of directors' quality, a composite score (measure) of the firm's board quality and ranges between 0 and 4 with 0 indicating lowest quality and 4 highest quality. The Board score consists of four variables, BODSIZE; BODIND; Non-CEO; and BODMEET, for which each of the measures are aggregated.
2. BODSIZE = Board size, a value of 1 is given if the number of members in the board is greater than median value, and 0 otherwise.
3. BODIND = Board independence, a value of 1 is given if the number of an independent board is equal at least 2 directors or 1/3 of the total board of directors (whichever is higher), and 0 otherwise.
4. Non-CEO = Non-CEO duality, a value of 1 is given if CEO and chairman are held by a different individual, and 0 otherwise.
5. BODMEET = Frequency of the board's meeting, a value of 1 is given if the number of board's meeting is greater than the median, and 0 otherwise.

4.6.1.2 Feedback Value Model (Model F)

With respect to the model was addressed by Barua (2006), Mahmud et al. (2009) and Mehri et al. (2013) (see Chapter 2, Section 2.3.6.3), the FV (CV) of earnings is evaluated as a component of relevance (which is one of the fundamental qualitative characteristics of earnings or attributes of earnings quality) to measure earnings quality.

Accordingly, this study proposes that the board size, number of independent non-executive directors on the board, non-CEO duality, and number of the board meeting (as

some characteristics of the board) have a relationship with the FV of earnings. Then, the Model F.1.1 is developed to test H1a: H1d. In this model, the FV (CV) of earnings is regressed on the board characteristics as follows:

(a) **Model (F.1.1)**

$$FV_{i,t} = \delta_0 + \delta_1 BODSIZE_{i,t} + \delta_2 BODIND_{i,t} + \delta_3 Non - CEO_{i,t} + \delta_4 BODMEET_{i,t} + \delta_5 SIZE_t + \delta_6 GWTH_t + \delta_7 YEAR_{i,t} + \varepsilon_{i,t}$$

Where:

$FV_{i,t}$ indicates the feedback value of the firm's annual earning i in year t

Additionally, this study suggests that there is an association between board quality and FV (CV) of earnings. In this regards, FV is regressed on the board quality in a separate model. Therefore, to test H1e, Model F.1.2 is developed, such as follows:

(b) **Model (F.1.2)**

$$FV_{i,t} = \alpha_0 + \alpha_1 BODQ_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 GWTH_{i,t} + \alpha_4 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.1.3 Neutrality Model (Model N)

Some scholars, such as Niu (2006), Velury and Jenkins (2006), Jiang et al. (2008), Dimitropoulos and Asteriou (2010), Johl et al. (2013), Krismiaji et al. (2016), Mudah et al. (2018), and Habbash, (2019) have measured earnings management (which results in non-neutral information) by abnormal accrual. This study also uses the magnitude of abnormal accrual, as measured by the Modified Jones Model (Dechow et al. 1995) (see Section 2.3.6.3), to proxy for the neutrality of earnings. Thus, in this research, the

neutrality of earnings is evaluated as a component of faithful representation (which is one of the fundamental qualitative characteristics of earnings or attributes of earnings quality) to measure earnings quality.

This study predicts that the board size, number of independent non-executive directors on the board, non-CEO duality, and number of the board meeting (as some characteristics of the board) have a relationship with the neutrality of earnings as a measure of the faithful representation of earnings. This study uses the magnitude of abnormal accrual as a proxy for the neutrality of earnings. Then, to test H1a: H1d, the Model N.1.1 is developed. In this model, the abnormal accrual is regressed on the board characteristics as follows:

(a) **Model (N.1.1)**

$$ABNAC = \delta_0 + \delta_1 BODSIZE_{i,t} + \delta_2 BODIND_{i,t} + \delta_3 Non - CEO_{i,t} + \delta_4 BODMEET_{i,t} + \delta_5 SIZE_{i,t} + \delta_6 GWTH_{i,t} + \delta_7 YEAR_{i,t} + \varepsilon_{i,t}$$

Where,

1. $ABNAC_{i,t}$ is the absolute value of the difference between actual accruals and expected accruals

Moreover, the association between the board quality and neutrality of earnings is measured by an alternative model. Thus, to test H1e, the Model N.1.2 is developed as follows:

(b) **Model (N.1.2)**

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 BODQ_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 GWTH_{i,t} + \alpha_4 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.2 Hypothesis 2: There is a relationship between audit committee characteristics and earnings quality

This study proposes some subsidiary hypotheses based on some characteristics of the audit committee as follows:

H2a: There is a relationship between audit committee size and earnings quality.

H2b: There is a relationship between audit committee independence and earnings quality.

H2c: There is a relationship between the frequency of audit committee meetings and earnings quality.

H2d: There is a relationship between audit committee financial expertise and earnings quality.

H2e: There is a relationship between audit committee quality and earnings quality.

Based on how to measure earnings quality, some models are developed as follows to test the hypotheses mentioned above.

4.6.2.1 Predictive Value Model (Model P)

Prior research has concluded that if the majority of audit committee's members are independent non-executive directors, are expert in financial and accounting topics adequately, and have a frequent meeting; they will be able to provide strong oversight and monitoring of financial reporting quality particularly the predictive ability of earnings. Therefore, it leads to the other testable hypotheses. According to the regression model measuring PV of earnings (see Section 4.6.1.1), Model P.2.1 is developed to test H2a: H2d as follows:

(a) **Model (P.2.1)**

$$\begin{aligned} OCF_{i,t+1} = & \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * ACIND_{i,t} + \pi_3 EARN_{i,t} * \\ & ACSIZE_{i,t} + \pi_4 EARN_{i,t} * ACMEET_{i,t} + \pi_5 EARN_{i,t} * ACEXP_{i,t} + \pi_6 EARN_{i,t} * \\ & SIZE_{i,t} + \pi_7 EARN_{i,t} * GWTH_{i,t} + \pi_8 YEAR_{i,t} + \varepsilon_{i,t} \end{aligned}$$

Where,

1. $ACIND_{i,t}$ is a proxy for audit committee independence, it is the proportion of independent directors on the audit committee
2. $ACSIZE_{i,t}$ is a proxy for audit committee size, it is a number of the directors on the audit committee
3. $ACMEET_{i,t}$ is a proxy for audit committee frequency of meeting which refers to the number audit committee meeting
4. $ACEXP_{i,t}$ is a proxy for audit committee financial expertise. It is the percentage of audit committee members with financial expertise on the audit committee.

The future cash flow-current earning relation is also regressed on the audit committee quality in a separate model. Then, the Model P.2.2 is developed to test H2e such as follows:

(b) **Model (P.2.2)**

$$\begin{aligned} OCF_{i,t+1} = & \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * ACQ_{i,t} + \pi_3 EARN_{i,t} * SIZE_{i,t} \\ & + \pi_4 EARN_{i,t} * GWTH_{i,t} + \pi_5 YEAR_{i,t} + \varepsilon_{i,t} \end{aligned}$$

Where,

1. ACQ = Audit committee's quality, a composite measure of the firm's AC quality and ranges between 0 and 4 with 0 indicating lowest quality and 4 highest quality. The ACQ score consists of four variables, ACSIZE; ACIND; ACEXP; and ACMEET, for which each of the measures are aggregated.

2. ACSIZE = Audit committee size, a value of 1 is given if the number of members in the AC is equal and greater than 3, and 0 otherwise.
3. ACIND = Audit committee independence, a value of 1 is given if the majority of AC's members are independent, it means the number of independent AC is greater than 1/2 of the total number of members in the AC (or proportion of AC independence is greater than 0.5, and 0 otherwise.
4. ACMEET= a value of 1 is given if the number of audit committee's meeting is equal or greater than 4, and 0 otherwise
5. ACEXP = Audit committee financial expertise, a value of 1 is given if the number of financial expert members in the AC is equal and greater than 1, and 0 otherwise.

4.6.2.2 Feedback Value Model (Model F)

Accordingly, this study proposes that audit committee independence, audit committee size, audit committee financial expertise and audit committee frequency of meeting have a relationship with the FV (CV) of earnings as a measure of relevance. Based on the model addressed in Section 4.6.1.2, the Model F.2.1 is developed to test H2a: H2d as follows:

(a) Model (F.2.1)

$$FV_{i,t} = \alpha_0 + \alpha_1 ACIND_{i,t} + \alpha_2 ACSIZE_{i,t} + \alpha_3 ACMEET_{i,t} + \alpha_4 ACEXP_{i,t} + \alpha_5 SIZE_{i,t} + \alpha_6 GWTH_{i,t} + \alpha_7 YEAR_{i,t} + \varepsilon_{i,t}$$

In addition to the model mentioned above, the FV (CV) of earnings is regressed on the audit committee quality in a separate model. Therefore, Model F.2.2 is developed to test H2e, such as follows:

(b) Model (F.2.2)

$$FV_{i,t} = \alpha_0 + \alpha_1 ACQ_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 GWTH_{i,t} + \alpha_4 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.2.3 Neutrality Model (Model N)

This study expects that audit committee independence, audit committee size, audit committee financial expertise and audit committee frequency of meeting have a relationship with the neutrality of earnings. Then, concerning the model explained in Section 4.6.1.3, this study uses the magnitude of abnormal accrual as a proxy for the neutrality of earnings. Therefore, the Model N.2.1 is developed to test H2a: H2d as follows:

(a) Model (N.2.1)

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 ACIND_{i,t} + \alpha_2 ACSIZE_{i,t} + \alpha_3 ACMEET_{i,t} + \alpha_4 ACEXP_{i,t} + \alpha_5 SIZE_{i,t} + \alpha_6 GWTH_{i,t} + \alpha_7 YEAR_{i,t} + \varepsilon_{i,t}$$

Moreover, the association between the audit committee quality and neutrality of earnings is measured by Model N.2.2 to test H2e as follows:

(b) Model (N.2.2)

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 ACQ_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 GWTH_{i,t} + \alpha_4 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.3 Hypothesis 3: There is a relationship between internal audit characteristics and earnings quality.

According to some characteristics of internal audit, some subsidiary hypotheses are proposed by this study as follows:

H3a: There is a relationship between internal audit experience and earnings quality.

H3b: There is a relationship between internal audit independence and earnings quality.

H3c: There is a relationship between internal audit quality and earnings quality.

Based on how to measure earnings quality, some models are developed as follows to test the hypotheses mentioned above.

4.6.3.1 Predictive Value Model (Model P)

According to the literature, this study predicts that experience and independence of the internal audit function (as some proxies of internal auditing characteristics) have an association with the PV of earnings as a measure of relevance. Then, based on the model addressed in Section 4.6.1.1, the Model P.3.1 is developed to test H3a and H3b as follows:

(a) Model (P.3.1)

$$OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * IAEXP_{i,t} + \pi_3 EARN_{i,t} * IAIND_{i,t} + \pi_4 EARN_{i,t} * SIZE_{i,t} + \pi_5 EARN_{i,t} * GWTH_{i,t} + \pi_6 YEAR_{i,t} + \varepsilon_{i,t}$$

Where,

1. *IAEXP* is a proxy for internal audit function's experience of firm *i* for year *t*. It is the age of the firm's IAF and is a number of years since the year of IAF establishment.
2. *IAIND* is a proxy for the independence of the internal audit function. A value of 1 is given if the IAF is established and performed outsourced, and 0 if IAF is established and performed in-house

Additionally, this study suggests that there is an association between internal audit quality and PV of earnings. In this way, the future cash flow-current earning relation is regressed on the internal audit quality in a separate model. Then, Model P.3.2 is developed to test H3c as follows:

(b) Model (P.3.2)

$$OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * IAQ_{i,t} + \pi_3 EARN_{i,t} * SIZE_{i,t} + \pi_4 EARN_{i,t} * GWTH_{i,t} + \pi_5 YEAR_{i,t} + \varepsilon_{i,t}$$

Where,

1. IAQ = Internal Auditing quality, a composite score (measure) of the firm's IA quality and ranges between 0 and 2 with 0 indicating lowest quality and 2 highest quality. The IA score is formed by aggregating the composite scores obtained from two constructs, IAEXP; and IAINND.
2. IAEXP = Internal audit experience is the age of the firm's internal audit function and is a number of years since the year of IAF establishment. A value of 1 is given if the value of the variable is above the median, and 0 otherwise.
3. IAINND = Independence internal audit, a value of 1 is given if IA function is outsourced, and 0 if it is run in-house.

4.6.3.2 Feedback Value Model (Model F)

Accordingly, this study proposes that there is an association between experience and independence of the internal audit function (as some proxies of internal auditing characteristics) with the FV (CV) of earnings as a measure of relevance. Following the model addressed in Section 4.6.1.2, the Model F.3.1 is developed to test H3a and H3b as follows:

(a) **Model (F.3.1)**

$$FV_{i,t} = \delta_0 + \delta_1 IAEXP_{i,t} + \delta_2 IAINND_{i,t} + \delta_3 SIZE_{i,t} + \delta_4 GWTH_{i,t} + \delta_5 YEAR_{i,t} + \varepsilon_{i,t}$$

Besides, the FV (CV) of earnings is regressed on the internal audit quality in a separate model. Therefore, Model F.3.2 is developed to test H3c as follows:

(b) **Model (F.3.2)**

$$FV_{i,t} = \alpha_0 + \alpha_1 IAQ_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 GWTH_{i,t} + \alpha_4 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.3.3 Neutrality Model (Model N)

Accordingly, this study expects that experience and independence of the internal audit function (as some proxies for internal auditing characteristics) have a relationship with the neutrality of earnings. Therefore, based on the model described in Section 4.6.1.3, this study uses the magnitude of abnormal accrual as a proxy for the neutrality of earnings. Then, the Model N.3.1 is developed to test H3a and H3b as follows:

(a) Model (N.3.1)

$$ABNAC_{i,t} = \delta_0 + \delta_1 IAEXP_{i,t} + \delta_2 IAIND_{i,t} + \delta_3 SIZE_t + \delta_4 GWTH_t + \delta_5 YEAR_{i,t} + \varepsilon_{i,t}$$

Moreover, the association between the internal audit quality and neutrality of earnings is measured by an alternative model. Thus, the Model N.3.2 is developed to test H3c as follows:

(b) Model (N.3.2)

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 IAQ_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 GWTH_{i,t} + \alpha_4 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.4 Hypothesis 4: There is a relationship between external audit characteristics and earnings quality.

This study proposes some subsidiary hypotheses based on some characteristics of external audit as follows:

H4a: There is a relationship between external audit size and earnings quality.

H4b: There is a relationship between external audit fee and earnings quality.

H4c: There is a relationship between external audit independence and earnings quality.

H4d: There is a relationship between external audit quality and earnings quality.

Based on how to measure earnings quality, some models are developed as follows to test the hypotheses mentioned above.

4.6.4.1 Predictive Value Model (Model P)

This study proposes there is a relationship between auditor firm size, audit fees, the audit independence (as some proxies of External Auditing Characteristics) and the PV of earnings as a measure of relevance. Then, based on the regression equation described in Section 4.6.1.1, the Model P.4.1 is developed to test hypotheses H4a, H4b, H4c as follows:

(a) Model (P.4.1)

$$OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * EASIZE_{i,t} + \pi_3 EARN_{i,t} * EAFEE_{i,t} + \pi_4 EAIND_{i,t} + \pi_5 EARN_{i,t} * SIZE_{i,t} + \pi_6 EARN_{i,t} * GWTH_{i,t} + \pi_7 YEAR_{i,t} + \varepsilon_{i,t}$$

Where,

1. $EASIZE_{i,t}$ is a proxy for Auditor Firm Size; indicator variable = 1 if the firm employs a Big 4 auditor; 0 otherwise.
2. $EAFEE_{i,t}$ is a proxy for Audit Fees.
3. $EAIND_{i,t}$ is a proxy for Audit Independence. It refers to the proportion of audit fees to the total fees paid to the audit firm.

Besides, the future cash flow- current earning relation is regressed on the external audit quality in a separate model. Then, Model P.4.2 is developed to test H4d as follows:

(b) **Model (P.4.2)**

$$OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * EAQ_{i,t} + \pi_3 EARN_{i,t} * SIZE_{i,t} \\ + \pi_4 EARN_{i,t} * GWTH_{i,t} + \pi_5 YEAR_{i,t} + \varepsilon_{i,t}$$

Where,

1. EAQ = External Auditing quality, a composite score (measure) of the firm's EA quality and ranges between 0 and 3 with 0 indicating lowest quality and 3 highest quality. The EA score consists of three variables, EASIZE; EAFEE; and EAIND, for which each of the measures is aggregated.
2. EASIZE = External audit firm size, a value of 1 is given if the firm is Big4, and otherwise 0.
3. EAFEE = External audit fee, a value of 1 is given if of Audit Fee is greater than the median, and otherwise 0.
4. EAIND = External audit independence, a value of 1 is given if the ratio of audit fee to total audit fees is more than 50 %, and otherwise 0.

4.6.4.2 Feedback Value Model (Model F)

Accordingly, this study predicts auditor firm size, audit fees and the audit independence (as some proxies of external auditing characteristics) have a relationship with FV (CV) of earnings as a measure of relevance. In line with the model described in Section 4.6.1.2, the model F.4.1 is developed to test H4a, H4b, and H4c as follows:

(a) **Model (F.4.1)**

$$FV_{i,t} = \alpha_0 + \alpha_1 EASIZE_{i,t} + \alpha_2 EAFEE_{i,t} + \alpha_3 EAIND_{i,t} + \alpha_4 SIZE_{i,t} \\ + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t}$$

In addition to the model mentioned above, the FV (CV) of earnings is regressed on the external audit quality in a separate model. Therefore, Model F.4.2 is developed to test H4d as follow:

(b) *Model (F.4.2)*

$$FV_{i,t} = \alpha_0 + \alpha_1 EAQ_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 GWTH_{i,t} + \alpha_4 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.4.3 Neutrality Model (Model N)

This study expects that there is a relationship between external auditing characteristics (such as auditor firm size, audit fees, and the audit independence) and neutrality (as a measure of a faithful representation of earnings). Then, this study uses abnormal accrual as a proxy for the neutrality of earnings based on the model explained in Section 4.6.1.3. Therefore, the Model N.4.1 is developed to test H4a, H4b and H4c as follows:

(a) *Model (N.4.1)*

$$ABNAC_{i,t} = \delta_0 + \delta_1 EASIZE_{i,t} + \delta_2 EAFEE_{i,t} + \delta_3 EAIND_{i,t} + \delta_4 SIZE_t + \delta_5 GWTH_t + \delta_6 YEAR_{i,t} + \varepsilon_{i,t}$$

Moreover, this study develops the Model N.4.2 to test H4d, which proposes an association between the external audit quality and the neutrality of earnings:

(b) *Model (N.4.2)*

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 EAQ_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 GWTH_{i,t} + \alpha_4 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.5 Hypothesis 5: The interaction between board quality and audit committee quality has an influence on earnings quality:

According to Beasley and Salterio (2001), the board significantly affects the audit committee quality in terms of knowledge and independence. Further, Cohen et al. (2004) believe that the interaction between the board of directors and audit committee in the

corporate governance mechanism can be effective to ensure earnings quality. Thus, to evaluate the interaction between the board and audit committee, this study needs to measure the quality of the board and audit committee by the composite score (see Table 4.2).

Therefore, based on primary qualitative characteristics of earnings (PV, FV/CV and representational faithfulness) defined by FASB/IASB in 2010 (see Section 2.3.6.3 in Chapter 2) and concerning how to measure earnings quality, three models are developed as follows:

4.6.5.1 Predictive Value Model (Model P)

This study suggests that the interaction between board quality and audit committee quality influences the PV of earnings. Predictive ability of earnings is measured by the regression of future cash flows on the current earnings. Then, Model P.5 is developed to test H5 as follows:

(a) Model (P.5)

$$\begin{aligned}
 OCF_{i,t+1} = & \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * BODQ_{i,t} + \pi_3 EARN_{i,t} * ACQ_{i,t} \\
 & + \pi_4 EARN_{i,t} * BODQ_{i,t} * ACQ_{i,t} + \pi_5 EARN_{i,t} * SIZE_{i,t} \\
 & + \pi_6 EARN_{i,t} * GWTH_{i,t} + \pi_7 YEAR_{i,t} + \varepsilon_{i,t}
 \end{aligned}$$

Where,

1. BODQ * ACQ which refers to the interaction term between BODQ and AC quality

4.6.5.2 Feedback Value Model (Model F)

This study predicts that the interaction between board quality and audit committee quality influences FV (CV) of earnings. Thus, the Model F.5 is developed to test H5 as follows:

(a) **Model (F.5)**

$$FV_{i,t} = \alpha_0 + \alpha_1 BODQ_{i,t} + \alpha_2 ACQ_{i,t} + \alpha_3 BODQ_{i,t} * ACQ_{i,t} + \alpha_4 SIZE_{i,t} \\ + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.5.3 Neutrality Model (Model N)

This study proposes that interaction between board quality and audit committee quality influences the neutrality of earnings as a component of the representational faithfulness of earnings. The abnormal accrual is utilised as a proxy for the neutrality of earnings. Then, the Model N.5 is developed to test H5 as follows:

(a) **Model (N.5)**

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 BODQ_{i,t} + \alpha_2 ACQ_{i,t} + \alpha_3 BODQ_{i,t} * ACQ_{i,t} + \\ \alpha_4 SIZE_{i,t} + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.6 Hypothesis 6: The interaction between board quality and external audit quality has an influence on earnings quality

According to O'Sullivan (2000) and Carcello et al. (2002), the quality of external auditing can be influenced by some CG mechanisms such as the board's characteristics. Therefore, the interaction between the board of directors and external auditing in the CG mechanism seems to be effective to ensure the earnings quality (Cohen et al., 2004). Other studies have not utilised this interaction. Thus, to evaluate the interaction between the board and external audit, this study needs to measure the quality of the board and external audit by the composite score (see Table 4.2).

As a result, based on primary qualitative characteristics of earnings defined by FASB/IASB (2010) (see Section 2.3.6.3 in Chapter 2) and concerning how to measure earnings quality, three models are developed as follows:

4.6.6.1 Predictive Value Model (Model P)

This study suggests that the interaction between board quality and external audit quality influences the PV of earnings. Predictive ability of earnings is measured by the regression of future cash flows on the current earnings. Then, Model P.6 is developed to test H6 as follows:

(a) Model (P.6)

$$\begin{aligned} OCF_{i,t+1} = & \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * BODQ_{i,t} + \pi_3 EARN_{i,t} * EAQ_{i,t} \\ & + \pi_4 EARN_{i,t} * BODQ_{i,t} * EAQ_{i,t} + \pi_5 EARN_{i,t} * SIZE_{i,t} \\ & + \pi_6 EARN_{i,t} * GWTH_{i,t} + \pi_7 YEAR_{i,t} + \varepsilon_{i,t} \end{aligned}$$

Where,

1. BODQ * EAQ refers to the interaction between BODQ and External Auditing quality.

4.6.6.2 Feedback Value Model (Model F)

This study predicts that the interaction between board quality and external audit quality influences FV (CV) of earnings. Thus, the Model F.6 is developed to test H6 as follows:

(a) Model (F.6)

$$\begin{aligned} FV_{i,t} = & \alpha_0 + \alpha_1 BODQ_{i,t} + \alpha_2 EAQ_{i,t} + \alpha_3 BODQ_{i,t} * EAQ_{i,t} + \alpha_4 SIZE_{i,t} \\ & + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t} \end{aligned}$$

4.6.6.3 Neutrality Model (Model N)

This study proposes that interaction between board quality and external audit quality influences the neutrality of earnings. The abnormal accrual is utilised as a proxy for the neutrality of earnings. Then, the Model N.6 is developed to test H6 as follows:

(a) Model (N.6)

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 BODQ_{i,t} + \alpha_2 EAQ_{i,t} + \alpha_3 BODQ_{i,t} * EAQ_{i,t} + \alpha_4 SIZE_{i,t} + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.7 Hypothesis 7: The interaction between audit committee quality and internal audit quality has an influence on earnings quality

A close relationship between the audit committee quality and internal audit quality has the potential to increase the CG capabilities of both parties (Cohen et al., 2004). Collectively, these studies propose that internal audit potentially may interact with audit committee in monitoring management effectively and improving financial reporting quality.

Therefore, the interaction between the audit committee and internal audit in the CG mechanism seems to be effective to ensure the earnings quality (Cohen et al., 2004). Other studies have seldom utilised this interaction. The composite score is calculated to measure the quality of the audit committee and internal audit in the evaluation of the interaction between audit committee quality and internal audit quality (see Table 4.2).

As a result, concerning FASB's/IASB's definition of primary qualitative characteristics of earnings in 2010 (see Section 2.3.6.3 in Chapter 2) and based on how to measure earnings quality, three following models are developed as follows:

4.6.7.1 Predictive Value Model (Model P)

This study proposes that the interaction between audit committee quality and internal audit quality influences the PV of earnings. Predictive ability of earnings is measured by the regression of future cash flows on the current earnings. Then, Model P.7 is developed to test H7 as follows:

(a) Model (P.7)

$$\begin{aligned} OCF_{i,t+1} = & \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * ACQ_{i,t} + \pi_3 EARN_{i,t} * IAQ_{i,t} \\ & + \pi_4 EARN_{i,t} * ACQ_{i,t} * IAQ_{i,t} + \pi_5 EARN_{i,t} * SIZE_{i,t} + \pi_6 EARN_{i,t} \\ & * GWTH_{i,t} + \pi_7 YEAR_{i,t} + \varepsilon_{i,t} \end{aligned}$$

Where,

1. ACQ * IAQ refers to the interaction between ACQ and IAQ.

4.6.7.2 Feedback Value Model (Model F)

This study predicts that the interaction between audit committee quality and internal audit quality influences FV (CV) of earnings. Thus, the Model F.7 is developed to test H7 as follows:

(a) Model (F.7)

$$\begin{aligned} FV_{i,t} = & \alpha_0 + \alpha_1 ACQ_{i,t} + \alpha_2 IAQ_{i,t} + \alpha_3 ACQ_{i,t} * IAQ_{i,t} + \alpha_4 SIZE_{i,t} \\ & + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t} \end{aligned}$$

4.6.7.3 Neutrality Model (Model N)

This study proposes that interaction between audit committee quality and internal audit quality and influences the neutrality of earnings. The abnormal accrual is utilised as a

proxy for the neutrality of earnings. Then, the Model N.7 is developed to test H7 as follows:

(a) **Model (N.7)**

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 ACQ_{i,t} + \alpha_2 IAQ_{i,t} + \alpha_3 ACQ_{i,t} * IAQ_{i,t} + \alpha_4 SIZE_{i,t} + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.8 Hypothesis 8: The interaction between audit committee quality and external audit quality has an influence on earnings quality

The role of the auditor in the governance process is very complicated as the auditor interacts with other key players in the governance mosaic such as the audit committee and the management (Cohen et al., 2004). Therefore, the interaction between the audit committee and external audit in CG mechanism seems to be effective to ensure of earnings quality (Cohen et al., 2004; Alves, 2013) while other studies have rarely utilised it. Thus, this study uses a composite score to measure the quality of the audit committee and external audit in the evaluation of the interaction between audit committee quality and external audit quality (see Table 4.2). Therefore, concerning FASB's/IASB's definition of primary qualitative characteristics of earnings in 2010 (see Section 2.3.6.3 in Chapter 2) and based on how to measure earnings quality, three models are developed as follows:

4.6.8.1 Predictive Value Model (Model P)

This study suggests that the interaction between audit committee quality and external audit quality influences the PV of earnings. Predictive ability of earnings is measured by the regression of future cash flows on the current earnings. Then, Model P.8 is developed to test H8 as follows:

(a) **Model (P.8)**

$$\begin{aligned} OCF_{i,t+1} = & \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * ACQ_{i,t} + \pi_3 EARN_{i,t} * \\ & EAQ_{i,t} + \pi_4 EARN_{i,t} * ACQ_{i,t} * EAQ_{i,t} + \pi_5 EARN_{i,t} * SIZE_{i,t} + \pi_6 EARN_{i,t} * \\ & GWTH_{i,t} + \pi_7 YEAR_{i,t} + \varepsilon_{i,t} \end{aligned}$$

Where,

1. ACQ*EAQ is the interaction between ACQ and external auditing quality.

4.6.8.2 Feedback Value Model (Model F)

This study predicts that the interaction between audit committee quality and external audit quality influences FV (CV) of earnings. Thus, the Model F.8 is developed to test H8 as follows:

(a) **Model (F.8)**

$$\begin{aligned} FV_{i,t} = & \alpha_0 + \alpha_1 ACQ_{i,t} + \alpha_2 EAQ_{i,t} + \alpha_3 ACQ_{i,t} * EAQ_{i,t} + \alpha_4 SIZE_{i,t} \\ & + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t} \end{aligned}$$

4.6.8.3 Neutrality Model (Model N)

This study proposes that interaction between audit committee quality and external audit quality influences on the neutrality of earnings. The abnormal accrual is utilised as a proxy for the neutrality of earnings. Then, the Model N.8 is developed to test H8 as follows:

(a) *Model (N.8)*

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 ACQ_{i,t} + \alpha_2 EAQ_{i,t} + \alpha_3 ACQ_{i,t} * EAQ_{i,t} + \alpha_4 SIZE_{i,t} + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.9 Hypothesis 9: The interaction between internal audit quality and external audit quality has an influence on earnings quality

Felix and Gramling (2001) indicated that the internal audit function quality and the degree of coordination between internal and external auditors affect the reliance of the external auditor on the internal audit. Likewise, Krishnamoorthy (2002) showed that when the technical competence, objectivity, and quality of the internal audit function is higher, the likelihood of contribution of the internal auditors to the external audit is higher.

Therefore, the interaction between internal auditing and external auditing in the CG mechanism seems to be effective to ensure the earnings quality (Cohen et al., 2004). Other scholars have not studied this interaction previously. Thus, to evaluate the interaction between internal audit and external audit, this study needs to measure the quality of the internal audit and external audit by the composite score (see Table 4.2).

As a result, based on FASB's/IASB's definition of primary qualitative characteristics of earnings in 2010 (see Section 2.3.6.3 in Chapter 2) and concerning how to measure earnings quality, this study develops three models as follows:

4.6.9.1 Predictive Value Model (Model P)

This study suggests that the interaction between internal audit quality and external audit quality influences the PV of earnings. Predictive ability is measured by the regression of future cash flows on the current earnings. Then, Model P.9 is developed to test H9 as follows:

(a) **Model (P.9)**

$$\begin{aligned} OCF_{i,t+1} = & \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * IAQ_{i,t} + \pi_3 EARN_{i,t} * EAQ_{i,t} + \\ & \pi_4 EARN_{i,t} * IAQ_{i,t} * EAQ_{i,t} + \pi_5 EARN_{i,t} * SIZE_{i,t} + \pi_6 EARN_{i,t} * GWTH_{i,t} + \\ & \pi_7 YEAR_{i,t} + \varepsilon_{i,t} \end{aligned}$$

Where,

1. IAQ * EAQ is the interaction between internal auditing quality and external auditing quality

4.6.9.2 Feedback Value Model (Model F)

This study predicts that the interaction between internal audit quality and external audit quality influences FV (CV) of earnings. Thus, the Model F.9 is developed to test H9 as follows:

(a) **Model (F.9)**

$$\begin{aligned} FV_{i,t} = & \alpha_0 + \alpha_1 IAQ_{i,t} + \alpha_2 EAQ_{i,t} + \alpha_3 IAQ_{i,t} * EAQ_{i,t} + \alpha_4 SIZE_{i,t} \\ & + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t} \end{aligned}$$

4.6.9.3 Neutrality Model (Model N)

This study proposes that interaction between internal audit quality and external audit quality influences the neutrality of earnings. The abnormal accrual is utilised as a proxy for the neutrality of earnings. Then, the Model N.9 is developed to test H9 as follows:

(a) **Model (N.9)**

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 IAQ_{i,t} + \alpha_2 EAQ_{i,t} + \alpha_3 IAQ_{i,t} * EAQ_{i,t} + \alpha_4 EARN_{i,t} * SIZE_{i,t} + \alpha_5 EARN_{i,t} * GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.10 Hypothesis 10: The interaction between board quality and internal audit quality has an influence on earnings quality

According to Johl et al. (2013), who argue that the strong boards demand high-quality internal auditing, this study predicts the interaction between boards and internal auditing can influence earnings quality. Thus, to evaluate the interaction between the board and internal audit, this study needs to measure the quality of the board and internal audit by the composite score (see Table 4.2).

Therefore, based on FASB's/IASB's definition of primary qualitative characteristics of earnings in 2010 (see Section 2.3.6.3 in Chapter 2) and concerning how to measure earnings quality, this study develops three models as follows:

4.6.10.1 Predictive Value Model (Model P)

This study suggests that the interaction between board quality and internal audit quality influences the PV of earnings. Predictive ability is measured by the regression of future cash flows on the current earnings. Then, Model P.10 is developed to test H10 as follows:

(a) **Model (P.10)**

$$OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t} + \pi_2 EARN_{i,t} * BODQ_{i,t} + \pi_3 EARN_{i,t} * IAQ_{i,t} + \pi_4 EARN_{i,t} * BODQ_{i,t} * IAQ_{i,t} + \pi_5 EARN_{i,t} * SIZE_{i,t} + \pi_6 EARN_{i,t} * GWTH_{i,t} + \pi_7 YEAR_{i,t} + \varepsilon_{i,t}$$

Where,

1. BODQ* IAQ is the interaction between BODQ and IAQ.

4.6.10.2 Feedback Value Model (Model F)

This study predicts that the interaction between board quality and internal audit quality influences FV (CV) of earnings. Thus, the Model F.10 is developed to test H10 as follows:

(a) *Model (F.10)*

$$FV_{i,t} = \alpha_0 + \alpha_1 BODQ_{i,t} + \alpha_2 IAQ_{i,t} + \alpha_3 BODQ_{i,t} * IAQ_{i,t} + \alpha_4 SIZE_{i,t} + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t}$$

4.6.10.3 Neutrality Model (Model N)

This study proposes that interaction between board quality and internal audit quality influences the neutrality of earnings. The abnormal accrual is utilised as a proxy for the neutrality of earnings. Then, the Model N.10 is developed to test H10 as follows:

(a) *Model (N.10)*

$$ABNAC_{i,t} = \alpha_0 + \alpha_1 BODQ_{i,t} + \alpha_2 IAQ_{i,t} + \alpha_3 BODQ_{i,t} * IAQ_{i,t} + \alpha_4 SIZE_{i,t} + \alpha_5 GWTH_{i,t} + \alpha_6 YEAR_{i,t} + \varepsilon_{i,t}$$

4.7 Research Models

This study uses various models to test all the hypotheses explained in the previous section. These models are summarised in Figures 4.2-4.5.

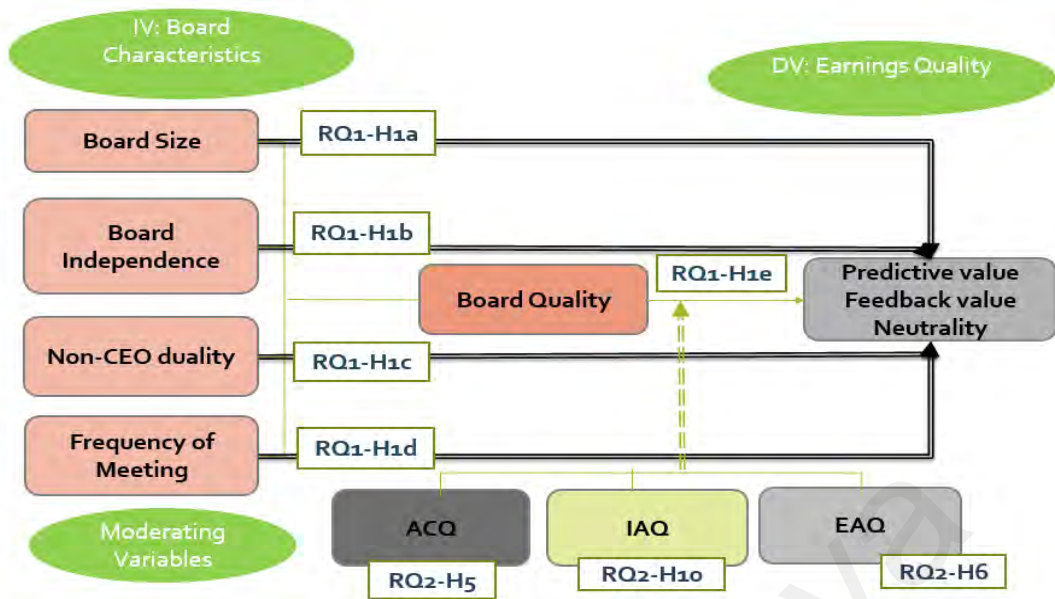


Figure 4.2: Moderating Role of Alternative Corporate Governance Mechanisms on the Link between Board Quality and Earnings Quality

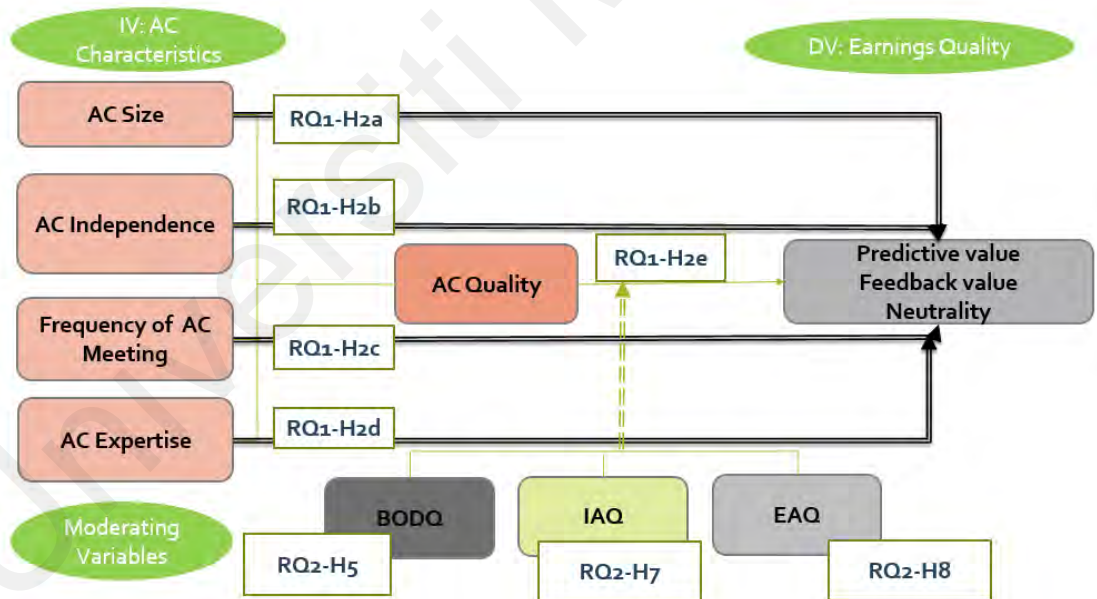


Figure 4.3: Moderating Role of Alternative Corporate Governance Mechanisms on the Link between Audit Committee Quality and Earnings Quality

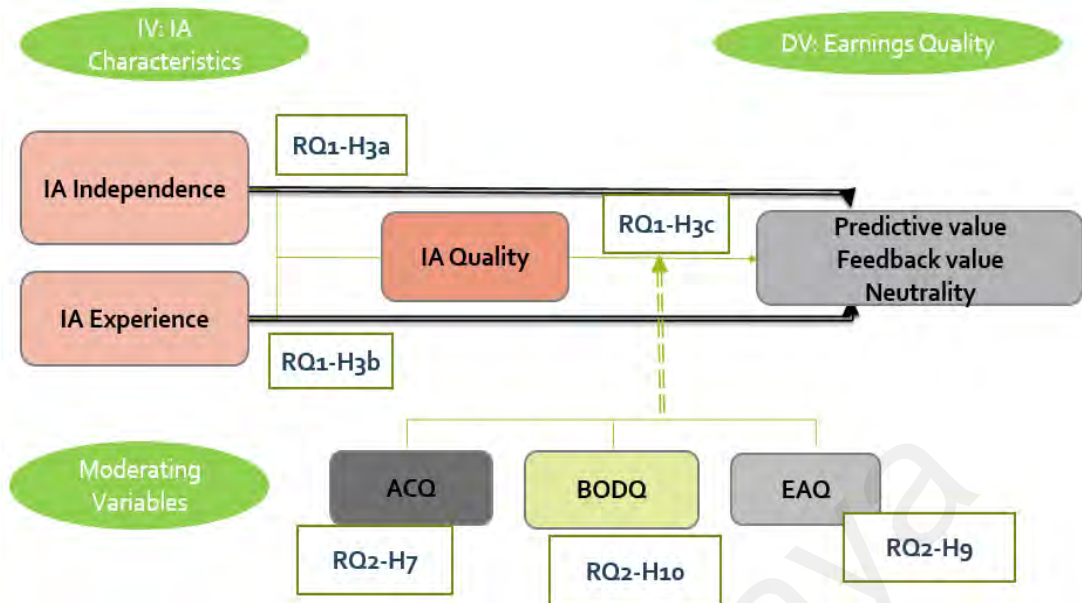


Figure 4.4: Moderating Role of Alternative Corporate Governance Mechanisms on the Link between Internal Audit Quality and Earnings Quality

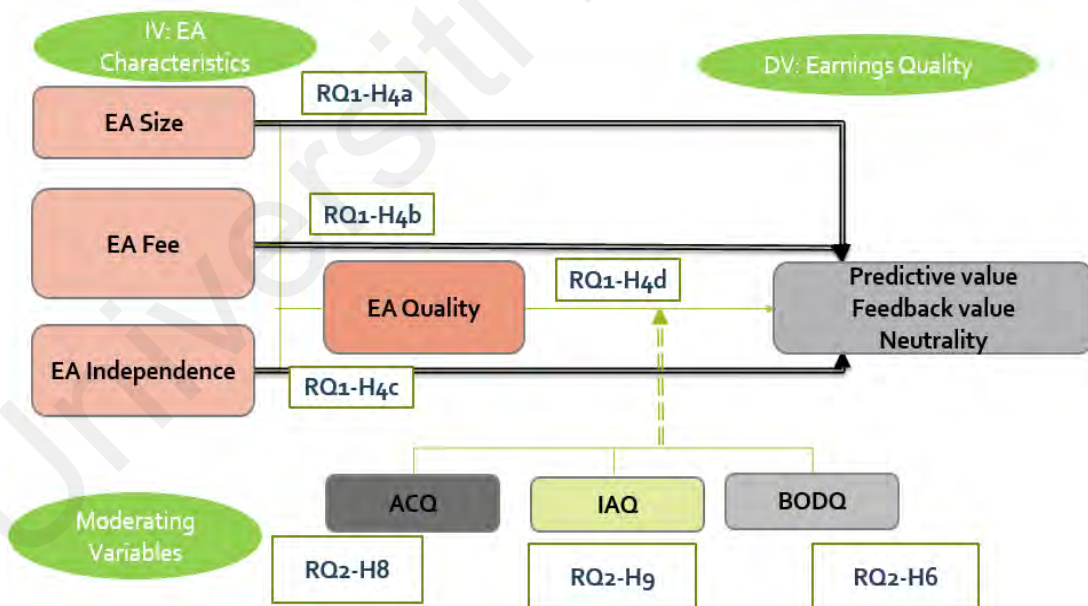


Figure 4.5: Moderating Role of Alternative Corporate Governance Mechanisms on the Link between External Audit Quality and Earnings Quality

4.8 Data and Sample

4.8.1 Unit of Analysis

Unit of analysis explains the level of analysis where information regarding the research is collected (Zikmund, Babin, Carr, & Griffin, 2003). Although determining the unit of analysis is very simple, it is very critical to ascertain the unit of analysis on the threshold of the study. The reason is that the determination of the variables for the theoretical model, sample size, suitable data collection approaches are reliant on the unit of analysis (Zikmund et al., 2003). Therefore, in achieving the objectives of this research, this study chooses firm-year as the unit of analysis.

4.8.2 Sample Description and Data Collection

This study includes all companies listed on the Main and Second Board of Bursa Malaysia with information available on all CG and financial variables for the seven years from 2007 to 2013. This study has selected Malaysia to collect the data as it is currently positioned as the 4th place among the world's top countries in attracting investors (Alnasser, 2012). Malaysia has had two reforms (2007, 2012) during the recent decade in order to increase the confidence of foreign investors that was lost after the Asian Financial Crisis of 1997 in the capital market. The revised code issued in October 2007 strengthens regulations on the independence, competence, and financial expertise of audit committee members. It also emphasises the need for all public listed companies to ensure that internal audit function is operationalised.

Moreover, the second revision took place in March 2012 to sets out the broad principles and specific recommendations on structures and processes which companies should adopt in making good CG. The purpose of this study is to examine the possible effect of governance on earnings quality during this period (2007-2013) concerning the effective date of these two MCCG's revision. This period covers three different periods

as follows. First, the year of 2007, when it is before the amended listing requirements were made effective in 2008. Second, the years of 2008, 2009, 2010 and 2011 when they are after the amended listing requirements were made effective in 2008 and also before the amended listing requirements were made effective in 2012. Third, the year of 2012 and 2013 when they are after the amended listing requirements were made effective in 2012.

Furthermore, this study needs some information about one year before 2007 and one year after 2013, respectively 2006 and 2014 to measure the lagged and future value of some indices (e.g. future cash flows, earnings in year $t-1$ etc.). Consequently, data for years between 2006 and 2014 was available at the time when data collection started. Selecting seven years for data collection by this study also interestingly supports the argument by Dechow and Dichev (2002) and Francis et al. (2005) which state that there are restrict data requirements for the accrual quality estimation that requires at least five year's residual value.

Bursa Malaysia official website provides the list of companies listed in Bursa Malaysia, comprising of both financial firms and non-financial firms. Four types of industries can be observed in the financial sector (insurance, banks, real estate, and diversified financial services). The non-financial sector includes eleven categories of industries and services. Similar to the prior studies, the financial firms were excluded in the current work since they have different instructions and rules imposed by the Central Bank of Malaysia (Abed et al., 2012). In other words, since the financial reporting requirements and disclosures of these companies are inherently different from the companies in other industries (Johl et al., 2013), these firms cannot be compared to firms in other sectors. The empirical models utilised in the current study are based on non-financial firms. That is why the financial firms were excluded due to the unique features of their financial statement (Anderson, 2003; Andres, 2008; Jiraporn et al., 2009; Al-

fayoumi, Abuzayed & Alexander, 2010). This study also eliminates companies with no fiscal year ending on December 31 to increase the homogeneity of the sample (Al-Dhamari & Ku Ismail, 2014).

The whole population of financial and non-financial firms are listed in Bursa Malaysia consists of 945 companies. The industrial and services sector include 905 industries in both of them, as indicated in table 4.4 and 4.5. The other criterion of the sample selection is the availability of data to measure all independent and dependent variables utilised in equations. Moreover, the sample will be restricted to December 31 year-end firms to allow comparable periods for all firms and to increase the homogeneity of the sample. It leaves the researcher with a final sample of 3388 firm-year observations for 484 out of the 945 companies across seven years. These were chosen based on the criteria explained in Table 4.4.

Table 4.4: Sample Selection Procedure

Criteria	No. of firm-years
All companies have been listed on the Main Board of Bursa Malaysia on 31 December 2013.	945
Less	
Financial Companies	40
Companies with no 31 December fiscal year-end	149
Companies with insufficient financial data	98
Companies with insufficient corporate governance data	174
Final Sample	484
Firm-year observations across 7 Years	3388

Table 4.5: Distribution of the Sample Firms

No	Sector	No. of Companies	Percentage %
1	Construction	34	7
2	Consumer Product	85	17.5
3	Hotels	4	0.08
4	Industrial	144	30
5	Industrial Product	2	0.04
6	IPC	1	0.02
7	Plantation	30	6
8	Properties	66	13.5
9	Reits	1	0.02
10	Technology	20	4
11	Trade and Service	97	20
Total		484	100

4.8.3 Characteristics of the Data

This study uses secondary data as the primary source of data. By definition, secondary data is the information that has been collected for purposes other than the project at hand (Malhorta and Birks, 2007). The main advantages of using secondary data are a quick way of obtaining data, low cost, and sometimes more accurate than the primary data (Schmidt and Hollensen, 2006). The data used in this study were collected from two sources: the Datastream database and the Annual Reports of the Malaysian companies. The Datastream database has provided this study with the data that relates to earnings quality as the dependent variable (e.g. the operating income, cash flows, assets etc.) and control variables (book value of assets). However, all data about corporate governance characteristics (Board size, audit committee size, internal audit experience, external audit size, etc.) were manually collected from the annual reports of selected Malaysian companies as the sample of this study. Fraser et al. (2006) argue that the company's annual reports are more accurate than other secondary data sources. Besides, they report

that information based on annual reports show a high level of reliability and quality. Entries are checked double by the researcher to avoid error while copying the data from annual reports. The author transforms variables with extreme values to mitigate the possible influence of outliers on the estimate of coefficients (Tabachnick & Fidell, 2007).

4.9 Panel Data

The main types of data that are generally available for empirical analysis are cross-section, time series, and panel. In cross-section data, values of one or more variables are collected for several sample entities, or units, at the same point in time. In time-series data, values of one or more variables are observed over a period of time for the same entities. In panel data, the same cross-sectional units (say firm or families or states) are surveyed over time. In short, panel data have space as well as time dimensions (Gujarati, 2003). Previous studies used different types of regression approaches, usually panel data. Baltagi and Giles (1998), Gujarati (2003), Greene (2003) elaborated on the following advantages of panel data;

- Using prior or extraneous data
- Combining time-series and cross-sectional data
- The omission of variables displaying high collinearity
- Obtaining new or transforming existing data

4.9.1 Balanced and Unbalanced Panel Data

Panel data combines cross-section dimensions, which refer to individuals or companies, and time-series dimensions refer to the periods covered by the study. Balanced panel data occurs when each cross-sectional unit has the same number of time-series observations. In contrast, unbalanced panel data refers to the case in which the number of time-series observations differs amongst panel units (Gujarati and Porter,

2009). This study uses balanced panel data due to having the same number of observations for each company.

4.9.2 Panel Data Regression Models

There are three regression models to analyse the panel data set. The first regression model is the Pooled-Ordinary Least Square (Pooled-OLS) in which all observations for all periods are treated as a single sample. The primary assumption of Pooled-OLS regression is that the regression coefficients, both the slope and intercept, are equal for all units (the companies in this study). This estimation method ignores any form of heterogeneity across units. In other words, if heterogeneity (or individual effect) is observed for all individuals, it means there is only the constant term for all units. The entire model can be treated as an ordinary linear model and fit by least squares (Greene, 2012). The second model, namely the Fixed Effects Model (FEM), assumes that differences across units can be captured by differences in constant terms (Greene 2007). Thirdly, the Random Effects Model (REM) as a third model, also allows the intercept to vary between units, but the variation is treated as randomly determined. Therefore, this model limits the loss of the degrees of freedom compared to the FEM. REM estimator is a combination of between-group and within-group variations.

4.9.3 Choosing the Appropriate Regression Model for Panel Data

4.9.3.1 Differentiation between Fixed Effects and Random Effects

The Hausman Test (1978) is a standard test used to check for strict exogeneity in social sciences (if an explanatory variable is exogenous when the relationship between continuous variables is tested). This test is used to determine which previous methods (fixed or random effects) can be adopted. The Hausman test differentiates between random and fixed effects methods by verifying the correlation between the X variables

and the individual random effects ϵ_i . In other words, it should be used to test if there is a significant correlation between ϵ_i and X_i . The null hypothesis is that ϵ_i and X_i are uncorrelated. If the null hypothesis is rejected (Probability $>$ chi2 is lower than 5%), then the fixed effects model will be preferable to the random effects model. It means if no correlation is found, random effects should be employed, but if a correlation exists, fixed effects should be employed. Hence, this study follows McKnight and Weir (2009), Habbash (2010), Alghamdi (2012), and Alves (2014) who used the Hausman test to verify these assumptions and to test the appropriateness of using the estimation of the random effects.

4.9.3.2 Differentiation between Random Effects and Pooled Model

If the random effect is shown as a preferable approach in the result of the Hausman test, it means there is no correlation between unobserved effects and the independent variables. In the next step, the test should be done to check whether there are any unobserved effects. In this case, the researcher should test the possibility that the model has been rigorously specified that there is no significant variation in unobserved effects across individuals. In this position, the pooled OLS should be used. Following Basiruddin (2011) and Alghamdi (2012), this study will also use the Breusch-Pagan Lagrange Multiplier (LM) test to test the existence of random effects. The null hypothesis will be that the variances of groups are zero (H_0 : no significant difference across the unit). If the null hypothesis is rejected, this means that there are random effects and then the random effects model is preferable. However, if the null hypothesis cannot be rejected, the pooled OLS model is preferable. Figure 4.6 shows the decision-making process for selecting the appropriate regression model for panel data.

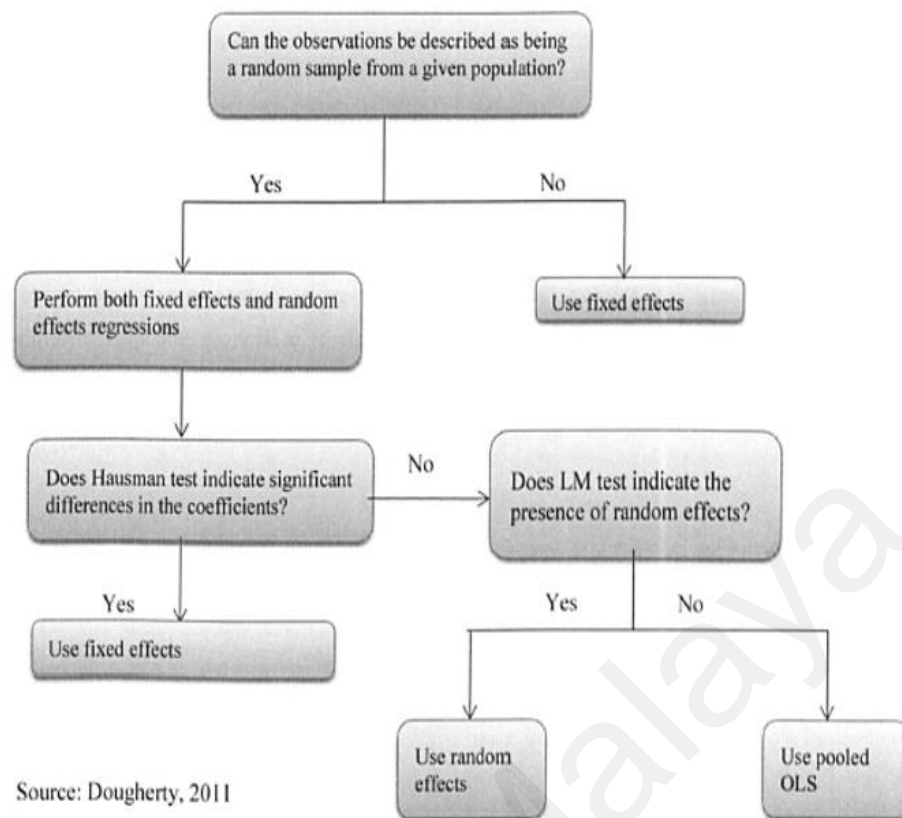


Figure 4.6: Choice of the Appropriate Regression for Panel Data (Dougherty, 2011)

4.10 Multiple Regression Models

Some multiple regression models are conducted to test the hypotheses of the study and answer its questions, as shown in Table 4.6.

The first four main hypotheses, namely H1 to H4, are developed to examine the effect of the characteristics of CG mechanisms on earnings quality. The second six main hypotheses, namely H6 to H10, are proposed to examine the effect of interaction between corporate governance mechanisms on earnings quality. Moreover, based on the qualitative characteristics of earnings such as relevance (PV and FV) and faithful representation (neutrality), three main models (P, F, N) are designed to test those hypotheses.

Table 4.6: Summary of the Hypotheses and Models

Research Question	Main Hypothesis	EQ	CG Characteristics	Sub Hypothesis	Sub Models	Main Models
RQ1	H1	Predictive Value	BODSIZE	H1a	P.1.1	P
			BODIND	H1b		
			NON-CEO	H1c		
			BODMEET	H1d		
			BODQ	H1e		
		Feedback Value	BODSIZE	H1a	F.1.1	F
			BODIND	H1b		
			NON-CEO	H1c		
			BODMEET	H1d		
			BODQ	H1e		
		Neutrality	BODSIZE	H1a	N.1.1	N
			BODIND	H1b		
			NON-CEO	H1c		
			BODMEET	H1d		
			BODQ	H1e		
	H2	Predictive Value	ACSIZE	H2a	P.2.1	P
			ACIND	H2b		
			ACMEET	H2c		
			ACEXP	H2d		
			ACQ	H2e		
Feedback Value		ACSIZE	H2a	F.2.1	F	
		ACIND	H2b			
		ACMEET	H2c			
		ACEXP	H2d			
		ACQ	H2e			
Neutrality		ACSIZE	H2a	N.2.1	N	
		ACIND	H2b			
		ACMEET	H2c			
		ACEXP	H2d			
		ACQ	H2e			
H3	Predictive Value	IAEXP	H3a	P.3.1	P	
		IAIND	H3b	P.3.2		
		IAQ	H3c			
	Feedback Value	IAEXP	H3a	F.3.1	F	
		IAIND	H3b	F.3.2		
		IAQ	H3c			
	Neutrality	IAEXP	H3a	N.3.1	N	
		IAIND	H3b	N.3.2		
		IAQ	H3c			
H4	Predictive Value	EASIZE	H4a	P.4.1	P	
		EAFEE	H4b			
		EAIND	H4c			
		EAQ	H4d			
	Feedback Value	EASIZE	H4a	F.4.1	F	
		EAFEE	H4b			
		EAIND	H4c			
		EAQ	H4d			
	Neutrality	EASIZE	H4a	N.4.1	N	
		EAFEE	H4b			
		EAIND	H4c			
		EAQ	H4d			
				N.4.2		

Table 4.6, continued

Research Question	Main Hypothesis	EQ	CG Characteristics	Sub Hypothesis	Sub Models	Main Models
RQ2	H5	Predictive Value	BODQ*ACQ	H5	P5	P
		Feedback Value	BODQ*ACQ	H5	F5	F
		Neutrality	BODQ*ACQ	H5	N5	N
	H6	Predictive Value	BODQ*EAQ	H6	P6	P
		Feedback Value	BODQ*EAQ	H6	F6	F
		Neutrality	BODQ*EAQ	H6	N6	N
	H7	Predictive Value	ACQ*IAQ	H7	P7	P
		Feedback Value	ACQ*IAQ	H7	F7	F
		Neutrality	ACQ*IAQ	H7	N7	N
	H8	Predictive Value	ACQ*EAQ	H8	P8	P
		Feedback Value	ACQ*EAQ	H8	F8	F
		Neutrality	ACQ*EAQ	H8	N8	N
	H9	Predictive Value	EAQ*IAQ	H9	P9	P
		Feedback Value	EAQ*IAQ	H9	F9	F
		Neutrality	EAQ*IAQ	H9	N9	N
H10	Predictive Value	BODQ*IAQ	H10	P10	P	
	Feedback Value	BODQ*IAQ	H10	F10	F	
	Neutrality	BODQ*IAQ	H10	N10	N	
Total Number=1	10	3	23	23	42	3

4.11 The Process of Secondary Data Analysis

This section discusses the various secondary data analysis procedures and statistical tests used in this study. The statistical tests are classified into two main groups; parametric and non-parametric tests. The selection between these two groups of statistics depends on the characteristics and the nature of data. Numerous research such as Gujarati (2003) and Berenson et al. (2009) propose some critical assumptions that should be tested and met before using parametric tests, which are;

1. Normality: this assumption requires that the data must be normally distributed.

2. **Multicollinearity:** This problem involves inter-correlation amongst the predictors of the model. The problem of multicollinearity makes the coefficient unreliable. It results in the impossibility of determining the relative importance of the independent variables because of inflation in the standard errors.
3. **Homoscedasticity:** under this assumption, the standard deviation or the variance of the dependent variable within the groups is required to be equal or homogeneous across the range of values of a predictor. Otherwise, the problem of heteroscedasticity will arise if the error variance is heterogeneous, which leads to biased standard errors and inefficient estimates.
4. **Independence of error terms:** this assumption requires that the error terms must be independent of each other, and thus no serial correlation must exist. In other words, parameter models demand that the error terms are uncorrelated and therefore, the observations are uncorrelated. Otherwise, there is autocorrelation.

The previous assumptions which are necessary to apply parametric test, are more potent if all assumptions are provided and variables under analysis are subjected to interval scales (Siegel, 1956). However, if no previous assumptions are provided, non-parametric testing is an optimum choice. Siegel (1956) and Judge et al. (1985) suggest that non-parametric testing remains the alternative test where previous assumptions are not applied to the data.

In the following sections, this study illustrates how these assumptions are tested and met by the dataset of this study. This study also shows that whether there are possible remedies that can be done when these assumptions are not met.

4.11.1 Descriptive Statistics

Descriptive statistics are applied to describe the essential characteristics of the study data. Furthermore, descriptive statistics are used to present quantitative descriptions in a

convenient and meaningful way. Descriptive statistics including mean, median, standard deviations, minimum, maximum, skewness and kurtosis of all variables (Hair, Black, Babin, and Anderson, 2010) are useful in making some general observations about the data. The mean provides an overall picture of the dataset. The minimum and maximum statistics are important to provide a range for each variable. For acquiring more information about the distribution of each variable, other statistics such as standard deviation are also required.

Previous assumptions of the parametric tests are examined in chapter five using skewness and kurtosis, which show the shape and normality of data distribution (Mark, 2008). Skewness that measures the lack of symmetry can be positive, negative, or even undefined. When the skewness is negative, it means that the tail on the left side of the probability density function is longer than the right side. In contrast, the positive skewness considers that the right tail of the distribution is longer than the left. The zero skewness shows that the data is distributed normally. Kurtosis also describes the shape of a probability distribution. It is a measure of whether the data heavy-tailed or light-tailed relative to a normal distribution. Skewness value of 0 and Kurtosis value of 3 shows that data is distributed normally.

Another way to examine whether the sampling distribution is normal is the Shapiro-Wilk tests (Shapiro and Wilk, 1965). This test calculates the level of significance for the differences from a normal distribution. The null hypothesis is to be set that the data set's population is normally distributed. Therefore, for a specific level of significance, if the p-value is less than the chosen alpha level, then the null hypothesis is rejected (i.e., one concludes the data are not from a normally distributed population). If the p-value is higher than the selected alpha level, the null hypothesis is not rejected, suggesting that the data derived from a normally distributed population (Field, 2009).

4.11.2 Correlation Matrix

In addition to testing the normality assumption, the variables needed to be checked for multicollinearity. Multicollinearity is considered to exist when there is a strong correlation between two or more predictors in the regression model (Field, 2009; Hair et al. 2010). Multicollinearity says that two or more predictor variables in a multivariate regression model are highly correlated. It means that some of the independent variables are closely associated in some cases. If there exists a high correlation between any two independent variables, multicollinearity may influence the result of multiple regression will be done in next steps. It may make a significant variable insignificant. Then the independent variable with a higher p-value will be excluded. In other words, highly correlated independent variables must be combined into a single input.

Tests of correlations and variance inflation factors (VIF) among the independent variables are applied to examine the probability of multicollinearity making an issue when drawing inferences from the regression analysis.

Furthermore, there are two types of bivariate correlation coefficients: Spearman Rho correlation coefficient (SCC) and Pearson correlation coefficient (PCC).

The minimum requirement to use a PCC is that the variables are interval variables (Field, 2009). SCC is a non-parametric statistic and is suitable for use when parametric assumptions are not met, such as non-normally distributed data (non-parametric). Therefore, the data of this study is suitable under both Spearman's Rho and Pearson's correlation requirements.

The correlation matrix is one of the critical aspects to examine, and it, at a glance, shows how variables are correlated with each other. The correlation matrix describes the degree of linear association between a couple of variables. The range of the correlation matrix is +1 to -1. If the correlation between two variables is ± 1 , it shows that there is a perfect linear association between two variables. Nevertheless, when the correlation

coefficient between two variables is near ± 1 or above ± 0.80 , the multicollinearity is considered (Hair et al., 2010).

Variance inflation factors (VIF) is one of the ways can be utilised to evaluate whether or not multicollinearity is a problem for a particular independent variable. The VIF take account of the variable's correlations with other independent variables on the right-hand side. A high VIF indicates the increase in the variation of the estimated coefficient. It shows that the associated independent variable is highly collinear with other independent variables in the model. Generally, if VIF values are less than 10 and also all values for $1/\text{VIF}$ (tolerance factor) are more than 0.1, it can be concluded that there is no multicollinearity problem in any of the regression models (Gujarati, 2003; Abdul Rahman & Ali, 2006; Kennedy, 2008; Hair et al., 2010). Thus, according to Johl et al. (2013), except for estimations using interactions, VIF was calculated for each independent variable after each estimation.

4.11.3 Testing for Heteroscedasticity

Another assumption in multivariate regression is homoscedasticity. Homoscedasticity occurs when the variance of disturbance is not constant. It is tested by using the visual inspection of the residuals. Heteroskedasticity occurs when the variance of disturbance is not constant. According to Mark (2008), the residuals are plotted in a graph against the independent variables that is suspected of causing the problem of heteroscedasticity. If the magnitude of the residuals seems to be related to the value of the independent variable, then there is a high possibility of heteroscedasticity. If the squared residuals get larger or smaller when a particular independent variable gets larger or smaller, then it will probably suffer from heteroscedasticity.

In other words, for the estimator to be considered consistent and unbiased, the errors in each period should be uncorrelated with the independent variables in the same period.

Heteroskedasticity does, however, bias the variance of the estimated parameters (Pindyck and Rubinfeld, 2013). In terms of heteroskedasticity, this study uses Breusch-Pagan/Cook-Weisberg tests to examine the variance between variables (Basiruddin, 2011; Shabeeb, 2013). The null hypothesis is that the residuals are homoscedastic.

4.11.4 Testing for Serial Correlation

Serial correlation test in panel data models is also estimated. If it biases, it will lead to less effective results. Serial correlation occurs in the cases that there is a correlation between one observation's error term (ε_i) and another observation's error term (ε_j): $\text{Corr}(\varepsilon_i, \varepsilon_j) \neq 0$, hence, it is stated that the errors are serially correlated. In other words, serial correlation happens in the cases that there is a correlation between error terms from different periods (or cross-section observations). Thus, it can be stated that the error term is serially correlated. Serial correlation occurs in time-series studies when the errors associated with a given time period carry over into future time periods. It often occurs since there is an economic relationship between the observations. For instance, in time-series data, the observations measure the same variables at different points in time. Another example is in the cluster sampling in which the observations measure the same variables on related subjects (e.g., more than one member of the same family, more than one firm operating in the same company) (Stata command guide). The current study runs Wooldridge serial correlation test (2002) to identify a serial correlation. The null hypothesis is that there is no first-order correlation (Al-Dhamari & Ku Ismail, 2013; Mollah et al., 2019).

4.11.5 Fixed Effects, Random Effects or Pooled Regressions Model

This study has illustrated earlier in this chapter that the panel data will be applied to test the hypotheses of this study. It is also discussed the theoretical basis for selecting

among the different regression models that can be used for panel data. Dougherty (2011) argues that this study should first select between FE and RE models (Hausman Test). If the FE model is found more efficient, then this study should go for it directly because it will also be more efficient than pooled regression. On the other hand, if the RE model is more efficient than FE model, then this study should have an additional test (Breusch-Pagan Lagrange Multiplier Test) to select between the RE model and pooled regression model (Alghamdi, 2012; Shabeeb, 2013). These steps will be conducted in the next chapter.

4.11.6 Multiple Regression

Multivariate regression is a technique that evaluates a single regression model with more than one dependent variable. Multiple regression has more than one independent variable in one formula. When there are several predictor variables in the multivariate regression model, the model is a multivariate multiple regression. Besides, multivariate regression is concerned with how dependent and independent variables are related to each other. For the multivariate regression, most prior studies used OLS regression to examine the association between independent and dependent variables. The multivariate regression will be applied after ensuring that the assumptions are met. According to Gujarati (2003), there are various multiple regression assumptions, such as normality, homogeneity, independence from error and multicollinearity. They are tested before the parametric tests are applied to the models.

If the data of this study does not meet the assumptions required for parametric tests as mentioned above, particularly in terms of heteroscedasticity and normality, the non-parametric test will be used in this study to analyse the data.

The OLS estimate is not efficient in cases of normality violation (Greene, 2007). Also, standard errors may be biased and inconsistent. It can cause biased results that are not in

line with the real state (Baltagi, 2001; Greene, 2007). Pooled regression is a suitable way of examining that to what extent the results are sensitive to the alternative specifications (Beaver, 1998). Nevertheless, where the coefficient stays constant over time, the adoption of pooled regression would be more efficient since it provides greater flexibility in modelling differences in specific behaviour of the sample (Greene, 2007).

Several regression estimators, such as least square regression with robust standard error, weighted least square regression (sometimes known as generalized least squares regression or GLS), robust regression, and quantile regression provide an alternative to OLS regression when the assumptions have been violated. For instance, if the normality assumption is not established, and where the moderate outliers are present, robust regression (iteratively reweighted least squares) results in better estimation compared to OLS regression (Hamilton, 1992; Chen et al., 2003). When there exist serial correlation and heteroscedasticity, the least-squares estimator with robust standard error (Huber-White standard errors) or GLS regressions can reweight the error variance. Therefore, they can modify autocorrelation and heteroscedasticity (Adkins and Hill, 2007: 196; Gujarati, 2003: 387). Additionally, non-parametric regression, such as quantile regression ignores all the OLS assumptions (Gujarati, 2003)

Generalised least squares (GLS) is regarded as an approach used to estimate the parameters not known in a linear regression model. The GLS is applied when the variances of the observations are unequal (heteroscedasticity), or when there is a certain degree of correlation between the observations. A GLS regression is more suitable in that it corrects for the omitted variable bias in the presence of autocorrelation and heteroscedasticity in pooled time-series data. If there is no correlation between the errors in each period and the explanatory variables in the same period, pooled OLS estimator is consistent and unbiased. To obtain more efficient OLS, the coefficients should be constant. In other cases, ordinary least squares can be inefficient statistically, or it may

provide the wrong inferences. Afterwards, GLS is applied for the estimation of random effects models. Using this methodology, the scholars can investigate differences among cross-sectional units at the same time with differences within individual units over time (Gaur and Delios, 2006).

4.11.7 Sensitivity Test

The initial tests apply a panel data test. The pooled test (OLS) is another sensitivity analysis used in the current research. It assumes that all observations coincide. OLS is a suitable way of examining that to what extent the results are sensitive to the alternative specification (Beaver, 1998). Hence, a pooled test is run at the same time to verify the sensitivity of the findings (Alghamdi, 2012). The pooled test's findings are given in Chapter 5. The findings are considerably similar to the panel data-cross sectional analysis.

4.12 Summary of the Chapter

This chapter presents the paradigm and methodology used to conduct the research. This study applied the deductive positivism approach, where the pre-existing theoretical basis is identified and relied upon in developing the hypotheses. This chapter has described the data, the criteria to select the data, the sources of the data, the measurement of the data, and sampling design. Three main types of data are used in this study; earnings quality variables, CG variables and control variables. With a sample of 496 companies, the data used in this study were collected from two sources: the Datastream database and the Annual Reports of the selected Malaysian companies.

Earnings quality was measured by using the qualitative characteristics of accounting information based on FASB's/IASB's conceptual framework (2010) (relevance and faithful representation). Additionally, the study used different control variables such as firm size, firm growth, and annual effect dummies. CG variables were examined by investigating the effect board size, board independence, Non-CEO duality, the number of

the board meeting, audit committee size, audit committee independence, financial expertise of audit committee's members, the number of the audit committee meeting, audit firm size, audit fee, audit independence, internal audit's experience and internal audit independence on the qualitative characteristics of earnings.

Multiple regression analysis was chosen as the primary tool of analysis in this study. Panel data models could be specified as fixed effects or random effects in order to capture the effects of firm and time-specific heterogeneities. Moreover, this chapter examined the specification tests that might affect the CG variables, which may result in problems from understanding the significance of individual independent variables in the regression model. The following chapter will present the results and discussions of the descriptive statistics and the regression models.

CHAPTER 5: ANALYSES, RESULTS, AND DISCUSSION

5.1 Introduction

This chapter provides a detailed analysis of the relationship between corporate governance characteristics (such as characteristics of the board, audit committee, internal auditing and external auditing) and earnings quality. There are two attributes of earnings quality to be examined, namely relevance and faithful representation. Relevance has two components, including predictive value and confirmatory value (feedback value). Predictive value is measured by the current earnings-future cash flows relation. Accordingly, the feedback value is estimated by the difference between the absolute prediction error of next year's cash flow after considering the current year's earnings and the absolute prediction error of next year's cash flow before considering current year's earnings. Faithful representation is also described by one of its components, namely neutrality, measured by abnormal accrual. (See Chapter 2, Section 2.3.6.3). The results of 42 models testing 23 hypotheses are presented in this chapter. This chapter is organised as follows. Sections 5.2 and 5.3 present the descriptive statistics of the four mechanisms of CG and its correlation matrix. It is followed by additional analyses such as panel data analyses and specification test in sections 5.4 and 5.5, respectively. Then, sections 5.6 and 5.7 discuss multivariate results and sensitivity analysis of each model. The last section, Section 5.8, summarises and concludes the chapter.

5.2 Descriptive Statistics

This section provides descriptive statistics (mean, median, standard deviation, minimum, maximum, skewness and kurtosis) for CG characteristics, earnings quality and control variables (firm size, firm growth) relevant to this study. Descriptive statistics of continuous variables and dichotomous variables (non-CEO duality, internal audit experience, external audit size) are presented in Table 5.1 and Table 5.2, respectively.

Table 5.1: Descriptive Statistics of Continuous Variables

Stats	Mean	Median	Max	Min	Sd	Skewness	Kurtosis
BODSIZE	7.550	7	15	3	1.897	0.694	3.634
BODIND	0.449	0.43	1	0.18	0.121	0.810	3.544
BODMEET	5.345	5	17	2	1.892	2.425	10.64
NON-CEO	0.826	1	1	0	0.378	-1.723	3.971
BODQ	2.489	2	4	0	0.867	-0.098	2.614
ACSIZE	3.293	3	6	3	0.555	1.968	6.965
ACIND	0.852	1	1	0.25	0.163	-0.393	1.660
ACMEET	4.838	5	11	2	1.010	2.041	10.65
ACEXP	0.460	0.33	1	0	0.203	0.501	2.971
ACQ	3.939	4	4	2	0.246	-3.113	10.88
EAFEE	52318	32000	1900000	3000	95295.4	10.055	142.7
LNEAFEE	10.43	10.37	14.46	8.01	0.815	0.644	4.551
EAIND	0.711	0.72	0.95	0.06	0.271	-0.609	2.159
EASIZE	0.597	1	1	0	0.490	-0.398	1.158
EAQ	1.845	2	3	0	0.860	-0.165	2.166
IAEXP	7.353	7	18	0	2.663	-0.123	4.197
IAIND	0.473	0	1	0	0.499	0.107	1.011
IAQ	0.964	1	2	0	0.698	0.048	2.047
EARN t	0.045	0.040	0.555	-0.74	0.085	-0.69	13.97
OCF t+1	0.065	0.052	0.752	-1.05	0.103	-0.2	12.22
TOTAL ASSETS (RM'000)	1637218	340740.5	88469100	540	57622	8.074	79.84
SIZE (LN TOTAL ASSETS)	12.90	12.73	18.298	6.29	1.440	0.622	4.052
GWTH	0.055	0.035	1.799	-0.97	0.191	1.484	15.41
FV	0.019	0.010	15.249	-0.20	0.340	6.041	27.66
ABNAC	0.043	0.030	0.288	0.000	0.720	4.468	10.72

Table 5.2: Descriptive Statistics of Dichotomous Variables

Variables	No=0		Yes=1	
	Frequency	Percentage	Frequency	Percentage
Non-CEO Duality	84.006	0.173	399.993	0.826
EASIZE	194.735	0.402	289.264	0.597
IAIND	255.026	0.526	228.973	0.473

5.2.1 Descriptive Statistics of Board Characteristics

5.2.1.1 Board Size

Table 5.1 shows that the average board size (BODSIZE) consists of about eight members (mean = 7.55) with a minimum of 3 and a maximum of 15 members which is relatively consistent with the figure reported by Beekes et al. (2004) and Peasnell et al. (2005). They reported the average BODSIZE was 8.

However, the finding indicates the board size in Malaysian firms has become smaller in comparison with the earlier study by Abdul Rahman and Ali (2006) that has documented a mean of 8.89 of the board size. Notably, all companies have at least three (3) board members. These findings confirm that Malaysian companies prefer to comply with recommendations of the code of CG that state that each company should specify the number of members on the board, provided that the number of board members is not less than 3 and not more than 15. These results also indicate that Malaysian companies perhaps maintain the lower level of board size to gain the benefits of the influence of the smaller board size on earnings quality (see Chapter 5, Section 5.6.1.1).

5.2.1.2 Board Independence

Table 5.1 indicates that the mean value of independent non-executive directors on the board (BODIND) is 44.9 %. These findings emphasise a high compliance rate by the Malaysian companies with the MCCG that recommended at least 2 directors or 1/3 of the board of directors of listed companies should be independent directors. The mean proportion of independence member on the board is almost equal with prior research such as Basiruddin (2011) who reported 46% in the UK. However, it is significantly lower in comparison to 58.4%, 68%, and 75% of the US firms, as reported by Klien (2002), Abbott et al. (2003), and Carcello et al. (2002) respectively. This study shows the board independence in Malaysia is higher than the results of the studies by Peasnell et al. (2005)

in the UK and Bradbury et al. (2006) in Singapore. They reported that the percentage of independent non-executive directors to be 43% and 34.6% respectively.

This comparison implies that firms in the US are more likely to be dominated by independent non-executive directors. At the same time, in the UK and also in Malaysia, board members have an almost balanced representation of executive and independent non-executive directors.

5.2.1.3 Non-CEO duality

The MCCG prohibits combining the position of the chairman of the board of directors with any other executive position in the company. The results show that approximately 82.6 % of Malaysian companies have separated the position of the board of directors' chairman from CEO function. The current study found that 17.4 % of companies have duality position of CEO (see Tables 5.1 and 5.2). This result seems to be consistent with other research in Saudi Arabia that found 82% of the mean of non-CEO duality (Alghamdi, 2012).

This finding is lower than the mean was found by Shabeeb (2013). He reported that 96.4% of the companies in the UK separate the role of chairman and CEO. However, it is higher than the study by Peasnell et al. (2005), who reported that 76% of companies in the UK split the roles of Chairman and CEO.

5.2.1.4 Frequency of Board Meeting

The numbers of board meetings (BODMEET) is used as a measure of board activity. MCCG (2012) regular board meeting for discussing corporate issue and activities. As indicated in Table 5.1, the average number of board meetings is about 5.3, which is close to 6 meetings, as documented by Abdul Rahaman and Ali (2006). The frequency of board meetings in Malaysia appears to be less than what has been reported by Carcello et al.

(2002) and Abbott et al. (2003) in the US firms (about seven meetings in a year). Board members in the UK meet about eight times yearly, as reported by Basiruddin (2011) and Shabeeb (2013). However, board members in Malaysia meet more frequently than their counterpart in Saudi Arabia with a mean value of 4.5 (Alghamdi, 2012).

5.2.1.5 Board Quality

This study constructs a composite measure for the quality of the board (BODQ) using board size, board independence, Non-CEO duality and the frequency of board meetings. This study shows a mean of 2.48, a median of 2 and ranges between 0 and 4 (see Table 5.1). This approach is consistent with the earlier study by Johl et al. (2013) that measure board quality by using a composite score based on those four board characteristics. They reported an average score of 1.89, a median of 2 and ranges between 0 and 4. This study reported a higher mean score for board quality. It may be due to the fact that the Malaysian firms attempt to meet the requirements of the revised MCCG in 2012 to promote the board quality.

Hoitash et al. (2009) reported an average score of 2.41, a median of 2 and ranges between 0 and 5 for the strength of board in the US. They used five board attributes (comprising board size, the proportion of independent board members, board tenure, board meetings, and outside board memberships) to measure the strength of board but this study uses four board attributes. It shows that the board of the current study is a little stronger than Hoitash et al. (2009).

5.2.2 Descriptive Statistics of Audit Committee Characteristics

5.2.2.1 Audit Committee Size

The MCCG stipulates that the minimum number of audit committee members has to be not less than three (3). As shown in Table 5.1, this study found that the average audit

committee size (ACSIZE) is 3.29. This number indicates that most of the Malaysian companies comply with the recommendation of the MCCG. Similarly, Iskandar and Saleh (2009) assert the minimum audit committee members to be 3 in Malaysian firms.

Overall, this study shows the audit committee size in Malaysia to be smaller than the audit committee size reported by Xie et al. (2003) and Basiruddin (2011) in the US and UK (e.g. they found the mean value of ACSIZE of 4.53 and 3.635 respectively). However, the finding is relatively similar to the mean values of ACSIZE reported by Shabeeb (2013), Alghamdi (2012), Habbash (2010), Baxter (2009), and Mangena and Tauringana (2008) in the UK, Saudi Arabia, the UK, Australia, the UK by the numbers of 3.55, 3.12, 3.58, 3.12, 3.4 respectively. By contrast, it is higher than in Australia based on average ACSIZE of 2.56 as reported by Davidson et al. (2005).

5.2.2.2 Audit Committee Independence

Table 5.1 provides the descriptive statistics of audit committee independence (ACIND). On average, 85.2 % of audit committee members are outside directors. It is comparatively similar to the mean of ACIND in the US (89.9%) and Saudi Arabia (85 %) reported by Xie et al. (2003) and Alghamdi (2012) respectively. However, it is lower than the UK companies when Shabeeb (2013) found that the mean of ACIND is around 95%. By contrast, this result is slightly higher than Abbott et al., (2004) who reported that 75 % of their samples' firms have independent audit committee members. This result indicates strong compliance by the Malaysian companies with the recommendation of MCCG, which stipulates that all listed companies must have audit committees comprising three members of whom a majority shall be independent.

5.2.2.3 Frequency of Audit Committee Meeting

The frequency of audit committee meeting (ACMEET) per year is another issue that has received interest in this research area. On average, Table 5.1 shows that the frequency of audit committee meetings in Malaysia (4.84) is more than the requirement stipulated by the MCCG which states that each audit committee has to meet at least four times per year. The number of the audit committee meeting, as shown by this study (4.84) is higher than the mean (2.8) that reported by Iskandar and Saleh (2009) in Malaysia. It is maybe due to the different size of the sample.

In contrast to earlier findings, the mean frequency of audit committee meeting in Malaysia is higher than the mean value of ACMEET (3.06) in Australia (Baxter et al., 2009). It is also higher than ACMEET in the UK, based on figures reported by Habbash (2010), Basiruddin (2011), and Shabeeb (2013) an average of 3.45, 4, and 4 meetings per year respectively. Similarly, Based on the frequency of audit committee meeting reported by Alghamdi (2012) and Davidson et al. (2005) in Saudi Arabia and Australia, an average of ACMEET is respectively 3.25 and 2.50 which are lower than the finding of this study. However, it is similar to the US figure of 4.53 reported by Xie et al. (2003). The first reason for these differences is due to the different CG requirements in each country. For example, in the US and Malaysia, the BRC (1999) and MCCG (2012) recommends that audit committees meet at least once quarterly, whereas the UK Combined Code (2003) recommends at least three meetings a year. The second reason is that Malaysian firms seem to comply more with the listing requirements of Bursa Malaysia as a result of the MCCG's revision and the reform in the Malaysian CG practices.

5.2.2.4 Audit Committee Expertise

Table 5.1 shows that the average mean for audit committee expertise (ACEXP) is 0.46. It means 46% of the audit committee in Malaysia possess financial expertise. This finding

suggests compliance of Malaysian firms with the MCCG's recommendation that requires at least one audit committee member must be a member of the Malaysian Institute of Accountants (MIA); who has financial or accounting background. In comparison, studies by Xie et al. (2003), Habbash (2010), Alghamdi (2012), and Shabeeb (2013) reported the mean for ACEXP, 74% in the US, 77% in the UK, 66.9 % in Saudi Arabia, and 69.5% in the UK respectively.

5.2.2.5 Audit Committee Quality

This study measures the quality of audit committee (ACQ) using a composite score based on the four characteristics of the audit committee (audit committee size, audit committee independence, audit committee meeting frequency and the proportion of financial experts on the audit committee). According to Table 5.1, the mean (median) score of ACQ is 3.93 (4) out of the 4-maximum score (see Table 5.1). This score is about 98 % of the maximum value of the audit committee quality. This score is much higher than the mean value (67%) that was reported by Dellaportas et al. (2012) in Indonesia. Nonetheless, Dellaportas et al. (2012) measured audit committee effectiveness by different attributes including audit committee independence, audit committee expertise, audit committee charter, audit committee responsibility, audit committee size, audit committee frequency of meeting, and audit committee voluntary disclosure (the scoring of each requirement is between 0 and 2). They reported that the mean score of audit committee effectiveness is 9.35 out of the 14-maximum score (about 67% of the maximum value of the audit committee quality).

5.2.3 Descriptive Statistics of Internal Audit Characteristics

Concerning the internal audit characteristics, the MCCG (2012) has mandated the establishment of internal audit function (IAF) for all listed entities. MCCG has been silent

on the direct explanation of some characteristics of IAF. However, MCCG (2012) concentrated on some internal audit reforms and obliged reviewing competence and adequacy of IAF by AC. Thus, based on previous studies, to review competence and adequacy, the experience and independence of IAF can be considered as determinants for the effectiveness or quality of IAF.

5.2.3.1 Internal Audit Experience

As indicated in Table 5.1, the average number of internal audit experience (IAEXP) is about 7.35. Whereas, Prawitt et al. (2009) and Lin et al. (2011) documented the average number of internal audit experience in the US to be 6.35 and 8.90, respectively.

5.2.3.2 Internal Audit Independence

Regarding internal audit independence (IAIND), the result of this study showed that about 47.3 % of Malaysian firms (228 firms of the total sample) outsource its IAF (see Table 5.1 and Table 5.2). It is higher than what was reported by Johl et al. (2013). They found that 24 % of firms in Malaysia outsource their IAF to an outside provider, and 65 % have a full in-house IAF. This difference may be due to the different period of the study; data were gathered from the year 2009 and 2010.

In this regard, Mat Yasin and Puat Nelson (2012) and Prawit et al. (2012) reported that 23.3 % and 37% of companies outsourced their internal audit function in the US. In like manner, Abbott et al. (2016) also indicated that over 33% of companies in the US had outsourced its IAF. It shows that US companies prefer to have in-house IAFs.

5.2.3.3 Internal Audit Quality

In this study, internal audit quality (IAQ) index is a composite score that consists of two attributes, such as IAEXP and IAIND. The result of this study shows the mean

(median) of IAQ is 0.96 (1) out of the 2-maximum score of quality and ranging between 0 and 2, with 0 indicating lowest quality and 2 indicating highest quality (see Table 5.1).

Johl et al. (2013) addressed the internal audit quality composite score in Malaysia. It was the sum of the five internal audit attributes, including IAF independence, internal audit investment, experience, financial focus, and internal audit quality control assurance (each attribute is a score of 1 if it is above the median value). They reported the mean (median) of IAQ was 2.23 (2) out of the 4-maximum score of quality and ranged between 0 and 4 with 0 indicating lowest quality, and 4 indicating the highest quality

Similarly, Mat Zain et al. (2015) measured the composite score of the IAF effectiveness using nine attributes. Those attributes included a number of years of experience, tenure of IAF existence, number of staff in the IAF, number of staff in the IAF having professional qualifications, number of staff in the IAF with industry experience, number of staff in the IAF with auditing experience, number of staff in the IAF with information and communication technology (ICT) knowledge and experience, average training hours attended by IAF staff annually, and frequency of meetings between internal auditors and audit committee annually. Each attribute has a score of 1 if it is above the median. They reported that the mean (median) of IAQ were 4 (3) out of the 9-maximum score of quality and ranged from 0 to 9, with 0 indicating lowest quality, and 9 indicating the highest quality.

The mean score reported by this study is higher than Mat Zain et al. (2015) and lower than Johl et al. (2013). It is because of the different components that are used to measure IAQ.

5.2.4 Descriptive Statistics of External Audit Characteristics

Table 5.1 also presents a summary of the descriptive statistics in terms of external audit quality factors.

5.2.4.1 External Audit Size

MCCG requirements state that in appointing external audit, a listed issuer must consider the adequacy of the experience and resource of the audit firm. Then, they encourage Malaysian firms to select Big4 audit firms. The mean value of audit firm size (EASIZE) as indicated in Tables 5.1 and 5.2 is 59.7 %. This value also means that about 60% of sample firms (289 firms) in this study appoint Big4 as external auditors and 195 firms (40%) were audited by non-Big4. This result indicates that most Malaysian listed companies on the Main Market select Big4 audit firms to perform the audit assurance services. This feature is lower than the mean of EASIZE (69.9%, 74%) that was reported by Alves (2013) in Portugal and Johl et al. (2013) in Malaysia, respectively. Similarly, studies by Al-Rassas and Kamardin (2015b) and Alghamdi (2012) show that 55.9% and 60.8% of the sample firms appoint Big4 audit firms in Malaysia and Saudi Arabia, respectively. Moreover, Almasarwal (2015) shows that most Jordanian listed firms do not appoint big-4 audit firms since the average value of external auditor reputation is 0.33. The main reason for this difference is probably due to the cost of Big4 audit fees in different countries.

5.2.4.2 External Audit Fee

MCCG has been silent about fee should be paid to external audit firms. Payment depends on a cost-benefit pattern, which is considered by companies. The finding of this study shows the mean of audit fees (log) to be 10.43 which is close to the mean value reported by Al-Rassas and Kamardin (2015b) and Sayyar (2016); 11.92 and 10.24 respectively. It shows that the mean of audit fees (log) in Malaysia is higher than the external audit fee in the UK when Basiruddin (2011) reported 2.920 for the mean of audit fees (log).

5.2.4.3 External Audit Independence

MCCG state external audit should be independent to access the effectiveness of auditing. The proportion of the audit fees to total fees show the proxy for auditor independence. The results of this study indicate that the proportion of the audit fees to total fees is 71.1 % in Malaysia which indicate a high rate of auditor independence. It means about less than 30% of firms have engaged audit firm for the non-audit services. This rate is higher than the UK in which Habbash (2010) and Basiruddin (2011) reported that the ratio of audit fees to total fees is 0.55 and 0.582, respectively.

5.2.4.4 External Audit Quality

This study utilised a single composite score to measure the quality of the external audit using three characteristics of external audit, namely the audit fee, audit firm size and audit independence. The variable can range from zero to three, with 0 representing the lowest quality and 3 representing the highest quality. The result of this study shows a mean (median) of 1.85 (2.00) out of the 3-maximum score of external audit quality and ranging between 0 and 3 (see Table 5.1).

5.2.5 Descriptive Statistics of Earnings Quality Components

In Table 5.1, the descriptive statistics of the three earnings quality measures are indicated.

5.2.5.1 Current Earnings

Table 5.1 presents descriptive statistics on current earnings. The mean of current earnings scaled by the average total assets in this study is 0.045. It is higher than the mean was reported by Al-Dhamari and Ku Ismail in 2012, 2013 and 2014 as 0.034 in Malaysia.

It is much lower than the mean value was reported by Velury and Jenkins (2006) in the US (0.30) and by Mashayekhi and Bazaz (2010) in Iran (0.187). The reason for this difference can be due to the different sample size.

5.2.5.2 Future Cash Flow

Table 5.1 presents descriptive statistics of the future cash flow from operations. The mean value of future operating cash flow (OCF $t+1$) scaled by the average total assets has positive values of 0.065.

This value is lower than the means of one-year-ahead operating cash flows scaled by the average total assets were reported by Abdul Rahman and Ali (2006) (0.073), Al-Dhamari and Ku Ismail (2013) (0.067), and Johl et al. (2013) (0.07). Moreover, the mean future cash flows from operations that reported by Velury and Jenkins (2006) in the US and Alves (2014) in Portugal are approximately 0.076 and 0.071, respectively. This distinction may be due to different sampling methods and the different size of firms.

5.2.5.3 Feedback Value (Confirmatory Value)

With regards to the feedback value of earnings (FV), the mean is 0.019. The difference between the absolute prediction error of next year's cash flows after considering current year's earnings (PEA i,t) is smaller than the absolute prediction error of next year's cash flows before considering current year's earnings (PEB i,t). This finding suggests that the ability of the current year's earnings to change the prediction about next year's cash flows is high. It is inconsistent with the result reported by Mahmud et al. (2009). They reported a negative number for the mean of feedback value (-0.0004), which means the ability of the current year's earnings to change the prediction about next year's earnings is slightly low.

5.2.5.4 Abnormal Accrual

Abnormal accruals are undoubtedly crucial since they could create managers' discretion over accruals.

The descriptive statistics of the absolute value of abnormal accrual (discretionary accruals) for the companies in the sample of this study are presented in Table 5.1. It has a small mean (median) value of 0.043 (0.030). The mean absolute value of abnormal accrual (ABNAC) is less than that has been reported by some studies which use the Modified Jones Model to calculate the value of discretionary accruals (abnormal accruals).

For example, a study conducted by Habbash (2010) in the UK show that the absolute value of ABNAC in the sample of the study has a small mean value of 0.05. Moreover, Klein (2002a) and Velury and Jenkins (2006) show that the mean of absolute ABNAC is 0.077 and 0.0976 for US companies. There are also other studies such as Niu (2006) in Canada, Bukit (2015) in Indonesia, Choi (2013) in Korea, and Chen, Cheng, and Wang (2015) in Singapore have reported the mean of abnormal accrual as 0.09, 0.0877, 0.06, and 0.057 respectively, which is considerably higher than those documented in this study.

In devolving countries such as Malaysia, Abdul Rahman and Ali (2006), Bradbury et al. (2006), Johl et al. (2013), and Al-Rassas and Kamardin (2015a) found that the value of the abnormal accrual of companies has a small mean value of 0.046, 0.05, 0.05 and 0.056 respectively. The findings of this study are also consistent with them. It is probably due to the reforms initiated by the regulatory agency in promoting best practices in corporate behaviour in a different country (Habbash, 2010).

5.2.6 Control Variables

5.2.6.1 Firm Size

The descriptive statistics of Table 5.1 indicate two control variables. Firm size (FIRMSIZE) is measured as the natural logarithm of the firm's total assets, and the mean

(median) value is 12.908 (12.7389). Different countries with different companies have different means for firm size. That is why it is not justifiable to compare the mean value between studies. However, in Malaysia, Wan Ismail (2011) stated the mean (median) of firm size as 8.453 (8.387). It is not similar to the result of this study since the sample is different.

5.2.6.2 Firm Growth

Firm's growth or asset growth (GWTH), measured as the percentage change in total assets. In this study, it has a mean (median) value of 0.058 (0.033). Different countries with different companies have different mean for the firm's growth. Therefore, there is no reason to compare the mean value between studies. However, the firm growth is lower than 1.09, 0.135 and 0.14 were reported respectively by Abbott et al. (2000), Velury and Jenkins (2006), and Abdul-Meguid et al. (2011).

5.3 Correlation Matrix

In this section, this study discusses the Pearson and Spearman correlation coefficients, which reveal the association between independent variables. These analyses help in identifying any significant collinearity problems that could affect the finding of the regression analyses. The correlation coefficients are checked for the presence of high collinearity among regressors. Prior literature has documented that a higher degree of correlation between variables may lead to a multicollinearity problem, mainly when the correlation coefficients are more than ± 0.8 (e.g. Alghamdi, 2012; Hair et al., 2010; Habbash, 2010; Abdul Rahman & Ali, 2006; Gujarati, 2003).

Tables 5.3 shows the Pearson correlation and the Spearman rank-order correlation matrix for all the variables used in the feedback value model and neutrality model of this study to show the association between independent variables. According to Johl et al.

(2013), this study excludes those estimations using interactions such as predictive value models and interacting effects models since there usually are correlations between those variables. From the correlation coefficients, shown in Table 5.3, no high correlation is found among the variables. As a result, the multicollinearity problem is not a significant concern in the study. It does not appear to create a threat to the interpretation of regression coefficients of the independent variables in the models of the study. Based on the panel G of Table 5.3, the only positive and significant correlation coefficient is between firm size and audit fees (by the coefficient of 0.60 and 0.55 in Pearson and Spearman correlation, respectively). It suggests that large firms pay more audit fees than do smaller firms. It is consistent with Habbash (2010) who reported 0.53 for this correlation in the UK.

Although most correlations are statistically significant, the correlations are less than ± 0.8 and not large enough to prohibit the use of multivariate regression analysis. Thus, it can be claimed that all these variables can be included in the models. However, since a large number of independent variables are used in the regression tests, there are still possibilities of the independent variables being collectively correlated with other variables. The univariate Pearson and Spearman correlation results are not able to detect the collective multiple correlations (Berry & Feldman, 1985). Therefore, this study examines the variance inflation factors of variables used in the regression tests to determine if such multiple correlations exist between independent variables. The variance inflations factors, as shown in Section 5.5.2.

Table 5.3: Pearson and Spearman Correlation

PEARSON					SPEARMAN	
Panel A: Board Characteristics						
	BODSIZE	BODIND	BODMEET	Non-CEO	FIRMSIZE	GWTH
BODSIZE	1	-0.363*	0.042*	0.115*	0.338*	0.128*
BODIND	-0.389*	1	0.075*	0.001	0.006	-0.074*
BODMEET	0.107*	0.065*	1	-0.022	0.121*	-0.038*
Non-CEO	0.106*	-0.015	0.006	1	0.077*	0.018
FIRMSIZE	0.376*	-0.022	0.227*	0.066*	1	0.235*
GWTH	0.095*	-0.050*	-0.018	0.023	0.222*	1
Panel B: Board Quality						
	BODQ	FIRMSIZE	GWTH			
BODQ	1	0.247*	0.037*			
FIRMSIZE	0.243*	1	0.235*			
GWTH	0.036	0.222*	1			
Panel C: AC Characteristics						
	ACSIZE	ACIND	ACMEET	ACFEXP	FIRMSIZE	GWTH
ACSIZE	1	-0.161*	0.073*	-0.193*	0.182*	0.030
ACIND	-0.44*	1	0.0206	0.057*	0.066*	0.023
ACMEET	0.115*	-0.001	1	-0.007	0.118*	-0.067*
ACFEXP	-0.169*	0.067*	-0.001	1	-0.036*	-0.015
FIRMSIZE	0.200*	0.046*	0.211*	-0.023	1	0.235*
GWTH	0.004	0.041*	-0.036*	0.000	0.222*	1
Panel D: AC Quality						
	ACQ	FIRMSIZE	GWTH			
ACQ	1	0.081*	0.034			
FIRMSIZE	0.082*	1	0.235*			
GWTH	0.029	0.222*	1			
Panel E: Internal Audit Characteristics						
	IAEXP	IAIND	FIRMSIZE	GWTH		
IAEXP	1	-0.044*	0.169*	0.030		
IAIND	-0.040*	1	-0.341*	-0.011		
FIRMSIZE	0.169*	-0.337*	1	0.235*		
GWTH	0.018	-0.005	0.222*	1		
Panel F: Internal Audit Quality						
	IAQ	FIRMSIZE	GWTH			
IAQ	1	-0.150*	0.021			
FIRMSIZE	-0.151*	1	0.235*			
GWTH	0.016	0.222*	1			

Table 5.3, continued

PEARSON						SPEARMAN
Panel G: External Audit Characteristics						
	EASIZE	LNEAFEE	EAIND	FIRMSIZE	GWTH	
EASIZE	1	0.3411*	-0.206*	0.317*	0.117*	
LNEAFEE	0.340*	1	-0.073*	0.557*	0.089*	
EAIND	-0.191*	-0.049*	1	-0.216*	-0.064*	
FIRMSIZE	0.318*	0.609*	-0.243*	1	0.235*	
GWTH	0.102*	0.076*	-0.075*	0.222*	1	
Panel H: External Audit Quality						
	EAQ	FIRMSIZE	GWTH			
EAQ	1	0.363*	0.076*			
FIRMSIZE	0.342*	1	0.235*			
GWTH	0.054*	0.222*	1			

5.4 Panel Data Analyses

5.4.1 Fixed Effects VS Random Effects

Panel data models can be specified as fixed effects (FE) or random effects (RE) that help to capture the effects of firm and time-specific heterogeneities. This study addresses some theoretical reasons to prefer the random effects model over the fixed effects model. Firstly, Greene (2012) suggests that the fixed effects model may only be appropriate to the cross-sectional firms in the tested sample and cannot be generalised outside that sample. Secondly, the fixed effects model cannot be used to examine time-invariant causes of the outcome variables. Technically, the fixed effects model is not preferable with slight time-changing variables as the case of some CG variables such as Non-CEO duality, audit committee independence and Big4 auditors (Dougherty, 2011).

The above reasons may be sufficient for this study to select the random effects regression model. Nevertheless, to justify the choice statistically, researchers typically use the Hausman Test to choose between fixed and random effects models (e.g. McKnight & Weir, 2009). The Hausman test examines whether unique errors (ϵ_i) are correlated with the regressors (X_{it}). The null hypothesis is that ϵ_i and X_{it} are uncorrelated. If p is < 0.05 (i.e., significant), the null hypothesis is rejected, and fixed effects are used (Greene, 2008)

(see Chapter 4, Section 4.9.3.1). The findings gained from the Hausman test for all models indicate that Prob>chi2 is higher than 5% showing that the null hypothesis is not rejected and the assumptions for the fixed effects estimation are violated. Therefore, random effects should be applied (see Table 5.4).

5.4.2 Testing Random Effects: Random Effects or Pooled OLS Regression

As what was shown in the previous section, the random effect is shown as a preferable approach in the result of the Hausman test, that is, there is no correlation between unobserved effects and the independent variables. In the next step, the new test should be done to indicate whether there are any unobserved effects done. In other words, the researcher should test the possibility that the model has been so well specified that there is no significant variation in unobserved effects across individuals. Therefore, in this case, this study uses the Breusch-Pagan Lagrange Multiplier (LM) test to examine the existence of random effects (see Section 4.9.3.2). The LM test helps scholars decide between a random-effects regression and a simple OLS regression.

The null hypothesis is that the variances across entities are zero; H0: no significant difference across unit (i.e., no panel effect). If p is < 0.05 , the null hypothesis is rejected, and this means that the random effect is preferable. However, if the null hypothesis cannot be rejected, the pooled OLS model is preferable.

It is clear from Table 5.4 that the p-values are less than .05 in all models. Therefore, the null hypotheses are rejected. It means there is a panel effect. Accordingly, it can be concluded that the random effects regression model is more appropriate than the pooled OLS regression.

Given the above discussion and the results of the Hausman test and LM test, this study finds that the random effects regression is the most efficient model for this data set.

Table 5.4: Panel Data Analysis & Specification Tests

		Hausman Test	Breusch Pagan Test	Appropriate Test (FE, RE, OLS)	Heteroscedasticity		Serial Correlation		Best Method (Deal with Hetero)
	M	Chi2 (Prob>Chi2)	Chi2 (Prob>Chi2)		Chi2 (Prob>Chi2)	exist	F (Prob>F)	exist	
First Series	P1.1	1321 (0.060)	350.86 (0.000)	RE	2.2 (0.000)	Yes	3.413 (0.0653)	No	GLS
	P1.2	1256 (0.052)	360.23 (0.000)	RE	2.2 (0.000)	Yes	3.350 (0.0673)	No	GLS
	F1.1	134.76 (0.100)	1023.9 (0.000)	RE	2.8 (0.000)	Yes	356.24 (0.076)	No	GLS
	F1.2	126.91 (0.073)	1050 (0.000)	RE	1.3 (0.000)	Yes	361.951 (0.060)	No	GLS
	N1.1	9.9 (0.531)	6703 (0.000)	RE	6.4 (0.000)	Yes	0.344 (0.5576)	No	GLS
	N1.2	14.41 (0.871)	6669.6 (0.000)	RE	4.3 (0.000)	Yes	0.337 (0.5619)	No	GLS
Second Series	P2.1	7886 (0.097)	207.47 (0.000)	RE	1.7e+10 (0.000)	Yes	2.186 (0.1400)	No	GLS
	P2.2	1421 (0.062)	312.15 (0.000)	RE	2.2e+1 (0.000)	Yes	3.398 (0.0659)	No	GLS
	F2.1	143.38 (0.113)	1017.9 (0.000)	RE	3.6e+10 (0.000)	Yes	296.392 (0.086)	No	GLS
	F2.2	126.70 (0.070)	1045 (0.000)	RE	1.7e+08 (0.000)	Yes	375 (0.069)	No	GLS
	N2.1	7.01 (0.798)	6715.2 (0.000)	RE	1.7e+07 (0.000)	Yes	0.345 (0.5574)	No	GLS
	N2.2	5.90 (0.588)	6729 (0.000)	RE	1.7e+07 (0.000)	Yes	0.341 (0.5596)	No	GLS
Third Series	P3.1	1216 (0.052)	357.66 (0.000)	RE	2.6e+10 (0.000)	Yes	3.388 (0.0663)	No	GLS
	P3.2	1317 (0.050)	337.55 (0.000)	RE	2.2e+10 (0.000)	Yes	3.285 (0.0706)	No	GLS
	F3.1	125.59 (0.061)	1043.3 (0.000)	RE	1.5e+08 (0.000)	Yes	361.743 (0.070)	No	GLS
	F3.2	126.60 (0.065)	1045.8 (0.000)	RE	2.2e+08 (0.000)	Yes	3760867 (0.091)	No	GLS
	N3.1	5.81 (0.455)	6725.2 (0.000)	RE	2.7e+07 (0.000)	Yes	0.334 (0.5634)	No	GLS
	N3.2	7.38 (0.496)	6717.4 (0.000)	RE	3.4e+07 (0.000)	Yes	0.338 (0.5614)	No	GLS
Fourth Series	P4.1	1173 (0.051)	262.25 (0.000)	RE	2.8e+10 (0.000)	Yes	3.003 (0.0837)	No	GLS
	P4.2	1356 (0.060)	330.95 (0.000)	RE	2.4e+10 (0.000)	Yes	2.790 (0.0955)	No	GLS
	F4.1	129.75 (0.068)	1036.2 (0.000)	RE	2.4e+08 (0.000)	Yes	327.677 (0.101)	No	GLS
	F4.2	128.87 (0.067)	1036.1 (0.000)	RE	1.6e+08 (0.000)	Yes	369.497 (0.000)	No	GLS
	N4.1	6.71 (0.534)	6718.8 (0.000)	RE	2.2e+07 (0.000)	Yes	0.336 (0.5626)	No	GLS
	N4.2	6.80 (0.558)	6719 (0.000)	RE	3.4e+07 (0.000)	Yes	0.342 (0.5592)	No	GLS

Table 5.4, continued

		Hausman Test	Breusch Pagan Test	Appropriate Test (FE, RE, OLS)	Heteroscedasticity		Serial Correlation		Best Method (Deal with Hetero)
	M	Chi2 (Prob>Chi2)	Chi2 (Prob>Chi2)		Chi2 (Prob>Chi2)	exist	F (Prob>F)	exist	
5 th Series	P5	1354 (0.060)	335.48 (0.000)	RE	2.2e+10 (0.000)	Yes	3.381 (0.0665)	No	GLS
	F5	126.66 (0.065)	1050 (0.000)	RE	1.2e+08 (0.000)	Yes	363.573 (0.093)	No	GLS
	N5	21.16 (0.720)	6663 (0.000)	RE	1.5e+07 (0.000)	Yes	0.340 (0.5600)	No	GLS
6 th Series	P6	1680 (0.071)	370.62 (0.000)	RE	2.5e+10 (0.000)	Yes	2.810 (0.0943)	No	GLS
	F6	128.33 (0.067)	1038 (0.000)	RE	1.2e+08 (0.000)	Yes	357.287 (0.066)	No	GLS
	N6	17.09 (0.670)	6653 (0.000)	RE	8.1e+07 (0.000)	Yes	0.342 (0.5591)	No	GLS
7 th Series	P7	1102 (0.049)	295.74 (0.000)	RE	2.1e+10 (0.000)	Yes	3.324 (0.0689)	No	GLS
	F7	126.43 (0.065)	1045 (0.000)	RE	3.0e+08 (0.000)	Yes	377.783 (0.056)	No	GLS
	N7	7.12 (0.517)	6722.9 (0.000)	RE	2.4e+07 (0.000)	Yes	0.342 (0.5592)	No	GLS
8 th Series	P8	8308 (0.097)	312.79 (0.000)	RE	2.3e+10 (0.000)	Yes	2.780 (0.0961)	No	GLS
	F8	128.69 (0.067)	1035.6 (0.000)	RE	1.7e+08 (0.000)	Yes	370.967 (0.073)	No	GLS
	N8	7.13 (0.545)	6722.7 (0.000)	RE	1.9e+07 (0.000)	Yes	0.352 (0.5533)	No	GLS
9 th Series	P9	9730 (0.100)	368.46 (0.000)	RE	2.1e+10 (0.000)	Yes	2.641 (0.1048)	No	GLS
	F9	129.92 (0.070)	1035.9 (0.000)	RE	7.5e+07 (0.000)	Yes	371.3 (0.052)	No	GLS
	N9	11.78 (0.603)	6691.9 (0.000)	RE	2.6e+07 (0.000)	Yes	0.347 (0.5561)	No	GLS
10 th Series	P10	6578 (0.078)	368.64 (0.000)	RE	2.0e+10 (0.000)	Yes	3.240 (0.0725)	No	GLS
	F10	125.59 (0.064)	1050.6 (0.000)	RE	1.7e+08 (0.000)	Yes	365.09 (0.063)	No	GLS
	N10	22.53 (0.712)	6649.0 (0.000)	RE	5.3e+07 (0.000)	Yes	0.338 (0.5611)	No	GLS

5.5 Specification Test

This study used panel data to investigate the impact of CG on earnings quality. However, before applying parametric tests or conducting any regression, some econometric issues needed to be addressed and some critical assumptions should be met that related to panel data (see Section 4.11).

5.5.1 Testing for Normality and Transformation of Data

Normality refers to the shape of data distributions for an individual quantitative data variable and its correspondence to the normal distribution. Normality can be assessed by obtaining the skewness and kurtosis values. However, some researchers argued that mild non-normality might not affect OLS or GLS regression outcomes, for data with big size (Box, 1954; Muthen & Kaplan, 1992; Ory & Mokhtarian, 2010).

It means when a sample is big, a lack of normality is common. Since the current research examined data from a large sample, this condition may not distort the results as a significant departure from normality may be negligible for a sample size of 200 or more (Hair et al., 2010).

5.5.1.1 Skewness and kurtosis

This study conducted standard skewness and kurtosis as the normality test. As indicated in Table 5.1, there are some problems with the normality assumption for seven variables (current income, future cash flows, absolute of abnormal accrual, feedback value, firm growth, total assets and audit fee). This problem is because the value of both skewness and kurtosis for some variables indicates high values.

Previous studies such as Abdul Rahman and Ali, (2006) suggest that data can be normally distributed if standard skewness is within ± 1.96 and standard kurtosis is ± 2 or ± 3 according to Haniffa and Hudaib, (2006). However, for the normality range of skewness, Leys et al. (2013) and Hair et al. (2010) suggested a higher threshold of ± 3 ; for the normality range of kurtosis, Kline (1998) suggested a higher threshold of ± 10 .

Therefore, the results from this approach (see Table 5.1) have led to the conclusion that the data set (except seven variables were mentioned above) has no serious violation of the normality assumption; therefore, it is assumed that the data are normally distributed.

Concerning non-normal data, this study followed earlier studies. It transformed the data by using natural logarithm for total assets and audit fee to get the best fit or to reduce their skewness or kurtosis and mitigate the influence of the outlier data points.

The value of skewness and kurtosis for audit fee after the transformation is 0.64 and 4.55, and for the natural logarithm of total assets is 0.62 and 4.05, indicating that the data is normally distributed (Table 5.1).

This study scales all dependent variables by the average total assets to account for differences in firm size. Additionally, this helps to increase the normality of these variables. However, the lack of normality of some variables (current income, future cash flows, abnormal accrual, feedback value and firm growth) is still expected as this study deliberately does not eliminate the outliers of these variables. Because, by excluding extreme value observations, the study may reduce those cases of the cash flows, earnings and abnormal accrual that are the focus of this research. For example, firms with extreme values of abnormal accrual potentially provide observations that represent large negative accruals or large positive accruals, which may represent management discretion (Habbash, 2010).

5.5.1.2 Shapiro-Wilk Test

Another way to examine whether the sampling distribution is normal is the Shapiro-Wilk tests (Shapiro and Wilk, 1965). Table 5.5 below shows the results of Shapiro-Wilk tests. This test calculates the level of significance for the differences from a normal distribution. The null hypothesis is to be set that the data set's population is normally distributed. Therefore, for a specific level of significance, if the p-value is less than the chosen alpha level, then the null hypothesis is rejected (i.e., one concludes the data are not from a normally distributed population). If the p-value is more than the selected alpha level, the null hypothesis is not rejected, suggesting that the data derived from a normally distributed population (Field, 2009).

The p-values for all variables (except external audit size, internal audit independence, and internal audit quality) are less than 0.05. Therefore, this study rejects the null hypothesis that these variables are typically distributed at the 0.05 significance level. It means most of the variables are not normally distributed.

Table 5.5: Test of Normality: Shapiro-Wilk Test

Variable	Obs	W	V	Z	Prob>z
BODSIZE	3388	0.97744	37.456	9.339	0
BODIND	3388	0.95648	72.252	11.032	0
BODMEET	3388	0.82278	294.242	14.651	0
Non-CEO	3388	0.99779	3.665	3.348	0.00041
BODQ	3388	0.99888	1.867	1.609	0.05378
ACSIZE	3388	0.97632	39.31	9.463	0
ACIND	3388	0.96313	61.208	10.604	0
ACMEET	3388	0.90238	162.077	13.114	0
ACFEXP	3388	0.94644	88.929	11.567	0
ACQ	3388	0.95587	73.269	11.068	0
LNEAFEE	3388	0.97663	38.803	9.43	0
EAIND	3388	0.96512	57.913	10.462	0
EASIZE	3388	0.9999	0.166	-4.632	1
EAQ	3388	0.99837	2.705	2.564	0.00517
IAEXP	3388	0.98112	31.348	8.88	0
IAIND	3388	0.99993	0.111	-5.673	1
IAEQ	3388	0.99994	0.101	-5.906	1
EARN t	3388	0.34698	1084.212	18.013	0
OCF t+1	3388	0.25855	1231.034	18.34	0
FIRMSIZE	3388	0.9707	48.647	10.012	0
GWTH	3388	0.84742	253.337	14.266	0
FV	3388	0.04385	1587.519	18.996	0
ABNAC	3388	0.47198	876.68	17.465	0
		v	between 1.2 and 2,4		

5.5.2 Testing for Multicollinearity

Multicollinearity occurs when two or more independent variables have a strong correlation in a regression model (Field, 2009). One of the most serious problems that multicollinearity may cause is misleading P values for the individual variables (the P-value is high, although the variable is essential). There are two methods to measure multicollinearity: the examination of the correlation matrix and the variance inflation factor (VIF).

The first method to test the collinearity is analysing Pearson and Spearman correlation matrix. The rule of thumb for detecting multicollinearity is when the correlation is > 0.800 (Gujarati, 2003). Table 5.3 present the correlation matrix and indicate that multicollinearity is not a problem because all correlations are below 0.800.

The second method to check the multicollinearity is VIF. VIF can be used to assess whether or not multicollinearity is a problem for a particular independent variable. In order to further investigate whether the correlations between 50%- 80% may indicate the problem of multicollinearity, the present study calculates the variance inflation factor (VIF) and tolerance value (1/VIF). The VIF shows the increase in the variance of the coefficient estimate that is attributable to the variable's correlations with other independent variables in the model. If the variables have VIF values higher than 10 or tolerance values lower than 0.10, then they are considered to have multicollinearity problems (Hair et al., 2010; Kennedy, 2008; Gujarati, 2003; Abdul Rahman & Ali, 2006).

Except for estimations using interactions (Johl et al., 2013), the results are presented in Table 5.6 indicate that all the independent variables used in each of the estimations had VIF values of less than 3 and tolerance values of higher than 0.10. It suggests that no multicollinearity problem exists.

Table 5.6: Variation Inflation Factor/ Tolerance Value

Panel A		
Variable	VIF	1/VIF
BODSIZE	1.42	0.704232
BODIND	1.22	0.821563
BODMEET	1.07	0.935503
Non-CEO	1.01	0.987114
GWTH	1.06	0.94394
FIRMSIZE	1.3	0.77166
Mean VIF	1.18	
Panel B		
Variable	VIF	1/VIF
BODQ	1.06	0.940352
GWTH	1.05	0.950249
FIRMSIZE	1.12	0.895066
Mean VIF	1.08	

Table 5.6, continued

Panel C		
Variable	VIF	1/VIF
ACSIZE	1.15	0.867808
ACIND	1.08	0.929791
ACMEET	1.06	0.942521
ACEXP	1.03	0.970336
FIRMSIZE	1.16	0.864961
GWTH	1.06	0.941547
Mean VIF	1.09	
Panel D		
Variable	VIF	1/VIF
FIRMSIZE	1.06	0.944869
GWTH	1.05	0.950453
ACQ	1.01	0.993096
Mean VIF	1.04	
Panel E		
Variable	VIF	1/VIF
IAEXP	1.03	0.970541
IAIND	1.14	0.880783
GWTH	1.06	0.944749
FIRMSIZE	1.23	0.814549
Mean VIF	1.11	
Panel F		
Variable	VIF	1/VIF
IAQ	1.03	0.974294
FIRMSIZE	1.08	0.926403
GWTH	1.05	0.948009
Mean VIF	1.05	
Panel G		
Variable	VIF	1/VIF
LNEAFEE	1.71	0.586433
EASIZE	1.19	0.842215
EAQ	1.11	0.903288
FIRMSIZE	1.81	0.552723
GWTH	1.06	0.942716
Mean VIF	1.37	
Panel H		
Variable	VIF	1/VIF
EAQ	1.13	0.881906
FIRMSIZE	1.19	0.840848
GWTH	1.05	0.950064
Mean VIF	1.13	

5.5.3 Testing for Heteroskedasticity

Heteroskedasticity occurs when the variance of the disturbance is not constant (Greene, 2012). This study tests the heteroskedasticity using the Breusch-Pagan/Cook-

Weisberg test, which explores the variance between variables. Breusch-Pagan / Cook-Weisberg tests the null hypothesis, which proposes that the residuals are homoskedastic. Hence, if the p-value is less than .05, the null hypothesis is rejected. It means that there is a heteroskedasticity in all models. Table 5.4 provides the result of Breusch-Pagan/Cook-Weisberg tests. It shows the heteroskedasticity exists in all regression models of this study.

5.5.4 Testing for Serial Correlation

Researchers need to identify serial correlation in a panel data model, because serial correlation in linear panel data models biases the standard errors and causes the results to be less efficient. Then, the assumption of independence of error terms or testing for serial correlation is also conducted in this study. Under this assumption, the error terms are independent of one another, and therefore no serial correlation exists. The null hypothesis is that there is no first-order autocorrelation. If $P < 0.05$, the H_0 is rejected and inverse. A new test for serial correlation in random or fixed effects models derived by Wooldridge (2002) is attractive because it can be applied under the general condition and is easy to implement. Drukker (2003) provides simulation results showing that the test has good size and power properties in reasonably sized samples. Table 5.4 shows that there is no serial correlation in the models of this study.

5.6 Multivariate Regression Analysis (Test of Hypotheses)

Regression analysis, which is one of the most commonly used techniques of multivariate analysis, is applied in this study. This study examines the effect of multiple variables on earnings quality as a dependent variable; thus, multiple regression is considered to be suitable in this study. The ordinary least squares (OLS) regression is considered to be a powerful technique when the model contains both dummy and

continuous variables (Hutcheson & Sofroniou, 1999). Nevertheless, the use of OLS regression is conditional, as indicated in the previous chapter (see Section 4.11.6).

Values of kurtosis and skewness for some variables were high in the descriptive analysis. If the standard skewness is within ± 1.96 , and standard kurtosis is ± 2 , data would be considered as normal (Abdul Rahman and Ali, 2006). The distribution of the dependent variable and most of the independent variables are not normal, as given in Tables 5.1 and 5.2. A transformation method is used, and still, there is not a normal distribution for some of the variables. Hence, normality, as one of the major assumptions of the parametric test is not fulfilled. Additionally, Abdul Rahman and Ali (2006) and Kao and Chen (2004) proposed that OLS is not appropriate for the regression if the dependent variable is the absolute value of abnormal accrual (earnings management) confined to just positive values.

The parametric tests generally have more power where all assumptions are fulfilled. Nevertheless, in the case of violation of the OLS assumptions by the data, non-parametric tests are regarded as more appropriate options (Balian, 1982). As stated by Zhang and Liu (2009), non-parametric approaches can serve as the alternatives for the parametric approach so that there is no need for fulfilling the assumptions that are required by parametric technique. Non-parametric tests are classified as a distribution-free method because no assumption is made about the sample scores distribution. Moreover, there is no need to measure the data on an interval scale in the non-parametric tests. The data in these tests need not meet the assumptions of normality and homogeneity of variance because the parametric tests require those assumptions to be met.

Under the violation of normality, OLS estimates are inefficient (Greene, 2007). Variables transformation sometimes resolves the issue of normality. However, there are other problems such as heteroskedasticity and autocorrelation that may influence the findings of OLS regression. Therefore, instead of OLS regression, GLS regression

technique is used as a multivariate test technique to contribute to dealing with these issues (Greene, 2012; Greene, 2007).

In such circumstances, this research applies the GLS estimation (random effects) panel regression over the seven-year test period was used in this study. This method allowed the study to test for variations among cross-sectional units simultaneously with variations within individual units over time (Baum, 2006). It assumes that regression parameters do not differ between various cross-sectional units and do not change over time, which strengthens the reliability of the coefficient estimates.

In order to examine the hypotheses of the study by exploring the effect of multi-variables on earnings quality as a dependent variable, this research applies GLS regression analysis as the most common technique of multivariate analysis.

Thus, in the following sections, the findings of the 42 multivariate regression models for the testing of the 10 main hypotheses (23 sub-hypotheses) related to 2 research questions will be reported.

In this regard, Table 5.7 to Table 5.16 present the results of all estimating equations as were explained in Chapter 4 using GLS estimates of the association between CG and three dimensions of earnings quality such as predictive value, feedback value (confirmatory value) and neutrality respectively. In addition to the firm's size and growth (see 4.4.3.1 and 4.4.3.2), year dummies are included to decrease any time dependence in the selected variables.

5.6.1 Analyses, Results, and Discussion to Answer Research Question 1: The Effect of Corporate Governance Mechanisms and Characteristics on Earnings Quality

In this section, this study tests the first set of hypotheses. This set of hypotheses examines the effect of multi-variables of CG as independent variables or predictors on earnings quality as a dependent variable.

5.6.1.1 Results and Discussion: Board Characteristics and Earnings Quality (Hypothesis 1)

H1: There is a relationship between board characteristics and earnings quality

From the perspective of board characteristics, this study empirically tests the effects of board size, board independence, non-CEO duality and frequency of board meeting on predictive value, feedback value and abnormal accrual as dimensions of earnings quality.

(a) Board Size and Earnings Quality (Hypothesis 1a)

Board size is a critical effective factor as one of the board characteristics that may influence earnings quality. Most prior studies that investigated the impact of board size on earnings quality found either a negative or a positive relationship.

H1a: There is a relationship between board size and earnings quality.

To test H1a, depend on different proxies of earnings quality, Model P.1.1 (predictive value model), Model F.1.1 (feedback value model) and Model N.1.1 (neutrality model) are used.

From the analyses conducted using the total sample of Malaysian firms, for BODSIZE, the association is significant for all earnings quality proxies.

In Model P.1.1, when this study uses the predictive value of earnings (current earnings-future cash flow relation) as a proxy for earnings quality, the coefficient for BODSIZE as shown in Table 5.7 is significant but negative (coefficient = -0.082 and $p < 0.001$). It

indicates that a smaller board is associated with higher earnings quality when it is measured by the predictive value of earnings. It shows that the smaller board size increases the ability of current earnings to predict future cash flow. It means board size is negatively related to the predictability of earnings.

In Model F.1.1, when feedback value is used as a second proxy for earnings quality, the results show the coefficient for the BODSIZE is negatively significant (Table 5.7: coefficient = -0.054 and $p < 0.05$). A plausible explanation is that when the board size decreases, the feedback value of earnings increases. The high feedback value means the absolute prediction error of next year's cash flow ($PEA_{i,t+1}$) *after* considering current year's earnings is smaller than the absolute prediction error of next year's cash flow ($PEB_{i,t+1}$) *before* considering current earnings. It indicates that when the board size is small, earnings have feedback value which leads to high earnings quality.

These results contradict the agency theory which argues that large boards are more effective due to the more information and expertise over smaller ones (Pearce & Zahra, 1992; John & Senbet, 1998), and provide the vital role of effective monitoring in uncertain economic and political periods to reduce agency problems (Mangena & Tauringana, 2008). It is not in line with resource dependence theory which argues that larger boards offer greater access to their firm external environment, which are viewed as a source of having board members with expertise and experience (especially those who are independent and can provide environmental links. RDT also argues that larger boards are less expected to engage in an opportunistic behaviour of earnings management that may deteriorate the quality of earnings numbers into interested parties (Chtourou et al., 2001; Bradbury et al., 2006).

Table 5.7: Results of the Relationship between Board Characteristics and Earnings Quality

GLS Regression							
RQ1	Usefulness of Earnings	Earnings quality based on primary qualitative characteristics of accounting information					
	Attribute	Relevance				Faithful representation	
	Components	Predictive Value		Feedback Value		Neutrality	
	Proxies	$(OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t})$		(FV)		(ABNAC)	
H1	Models	P1.1	P1.2	F1.1	F1.2	N1.1	N1.2
	Independent Variables	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)
	EARN t	1.339*** (8.96)	1.460*** (10.27)				
H1a	EARN*BODSIZE	-.082*** (-7.9)					
H1b	EARN*BODIND	.527*** (3.32)					
H1c	EARN*NON-CEO	.181** (3.03)					
H1d	EARN*BODMEET	.018* (1.84)					
H1e	EARN*BODQ		.048* (2.03)				
	EARN*FIRMSIZE	.186*** (10.53)	.221*** (13.31)				
	EARN*GWTH	-.025 (-0.28)	-.084 (-0.85)				
	EARN*YE-2008	.180** (2.58)	.130 (1.85)				
	EARN*YE-2009	.541*** (7.02)	.486*** (6.21)				
	EARN*YE-2010	.215** (3.17)	.194** (2.82)				
	EARN*YE-2011	-.032 (-0.53)	-.017 (-0.27)				
	EARN*YE-2012	.216*** (3.33)	.171** (2.63)				
	EARN*YE-2013	.182* (2.55)	.135* (1.85)				
H1a	BODSIZE			-.054* (-1.95)		.014*** (11.63)	
H1b	BODIND			.013** (3.05)		-.060** (-3.06)	
H1c	NON-CEO			.058* (2.25)		-.086*** (-17.58)	
H1d	BODMEET			.082* (2.38)		.0103 (0.87)	
H1e	BODQ				.010* (2.02)		-.045*** (-14.23)
	FIRMSIZE			.007* (2.18)	-.0003 (-1.1)	-.071*** (-4.15)	-.069*** (-5.67)
	GWTH			.004 (1.54)	.000 (0.29)	.007 (0.63)	-.013 (-1.01)
	YE-2008			.010*** (7.66)	.011*** (7.35)	.0008 (0.14)	-.0002 (-0.04)
	YE-2009			.011*** (7.86)	.011*** (7.52)	.003 (0.61)	.0007 (0.1)

Table 5.7, continued

GLS Regression							
		P1.1	P1.2	F1.1	F1.2	N1.1	N1.2
	YE-2010			.010*** (7.32)	.010*** (6.86)	.006 (0.95)	.004 (0.57)
	YE-2011			.012*** (8.43)	.011*** (7.81)	.013* (2.11)	.006 (0.91)
	YE-2012			.010*** (7.37)	.010*** (6.81)	.012* (1.98)	.006 (0.85)
	YE-2013			.021*** (8.89)	.011*** (6.95)	.006* (0.95)	.005 (0.80)
	INTERCEPT	18.93*** (21.96)	18.17*** (21.0)	.013* (2.51)	.016*** (3.68)	1.173*** (6.13)	1.184*** (7.66)
	R ²	0.686	0.685	0.03	0.04	0.193	0.182
	WALD CHI2	2984.41	2878.13	29.45	21.69	11.52	10.31
legend: * p<0.05; ** p<0.01; *** p<0.001 Number of Groups: 483 Number of Observations: 3388							

However, it supports the argument that boards with fewer members have lower difficulty to find time in discussing and reaching consensus on issues about the company's organisational structure (Lipton & Lorsch, 1992). They are also more likely to formulate and agree on specific opinions (Marashdeh, 2014). It is also consistent with the argument that smaller board have better communication and more timely and higher efficient decision-making (Karamanou & Vafeas, 2005; Dimitropoulos & Asteriou 2010). It can be suggested that when the board has enough time to discuss with management and acts timely and more effective to control the management whose responsibility is providing earnings, the earnings quality will be increased. Hence, earnings will be more relevant to users of financial statements. The findings from this study are consistent with Yermack (1996), Vafeas (2000), Ahmed et al. (2006), and Cho and Rui (2009) who provide evidence that earnings number is more informative for the companies with smaller board size.

The results of this study also support the argument by Al-Dhamari and Ku Ismail (2013) using a sample of Malaysian companies listed in 2008 and 2009 that the ability of earnings to predict future cash flows is low when the board size is large. It is also similar

to Mashayekhi and Bazaz (2010) who found that when board size increases, earnings predictability as an indicator of earnings quality decreases.

In Model N.1.1, when this study uses ABNAC as a proxy for earnings quality, it finds that BODSIZE is significantly and positively associated with ABNAC (Table 5.7: coefficient= .0146 and $p < 0.001$). The result indicates that larger boards are less effective in monitoring and controlling the aggressive actions of top executives. It is suggested that when the size of the board is small, the earnings seem to be neutral and then faithfully represented.

This finding is consistent with the argument obtained by the previous studies (Yermack, 1996; Eisenberg et al., 1998; Vafeas, 2000). As suggested by this argument, if the board is smaller, it would function more effectively in monitoring. Various reasons are justifying the higher effectiveness of the boards with a smaller size in the monitoring function. Lipton and Lorsch (1992) argued that smaller boards involves a fewer number of directors, and thus easier to be managed and are more organised. Jensen (1993) states that when the boards are small, it would be easier to coordinate the directors' efforts. Besides, the smaller board are more effective as they have better communication (Karamanou & Vafeas, 2005). Moreover, the directors in smaller boards less tend for free-riding showing higher accountability compared to the larger boards.

Moreover, the findings of this research support studies conducted by Mashayekhi and Bazaz (2010), Alves (2011) and Kang and Kim (2012). They found that large board size intensifies the earnings management. They also reported that small boards are more effective in decreasing managerial manipulation of earnings numbers and enhancing earnings quality. The result of this study is also consistent with the evidence from Malaysian markets provided by Abdul Rahman and Ali (2006), indicates a significant positive relationship between board size and the abnormal accrual as an empirical indicator of earnings management.

This study contradicts the results by Chtourou et al. (2001), Xie et al. (2003), Peasnell et al. (2005), Yu (2008), Habbash (2010), Gonzalez and Garcia-Meca (2014), Aygun et al. (2014), and Honu and Gajevszky (2014). They found that larger boards are associated with lower levels of abnormal accrual as a proxy for earnings management. They believe that an increase in board size increases the board's ability to monitoring and large boards are probably to increase diversity and financial expertise on the board. Zahra and Pearce (1989) state that larger boards have more ability than smaller boards of monitoring the management's behaviour. Hence, smaller boards may be more likely to be captured by top executives or controlled by major institutional shareholders and blockholders.

Thus, the result is inconsistent with the monitoring hypothesis of agency theory. These different findings may be due to the different markets and CG regimes in which some studies were based. Another probable argument for the opposite results of this study is that companies in developing countries are more controlled by family members on their boards. Therefore, an increase in board size may not always cause better governance.

(b) Board Independence and Earnings Quality (Hypothesis 1b)

Board independence (BODIND) is another effective component of board characteristics that may have an impact on earnings quality. Many studies with different results have been conducted in this area.

H1b: There is a relationship between board independence and earnings quality.

To test H1b, depend on different proxies of earnings quality, Model P.1.1 (predictive value model), Model F.1.1 (feedback value model) and Model N.1.1 (neutrality model) are used.

From the analyses conducted by this study, for BODIND, the association is significant for all earnings quality proxies.

In Model P.1.1, when the predictive value of earnings (current earnings-future cash flow relation) is used as a proxy for earnings quality, the coefficient for BODIND is significant and positive as Table 5.7 (coefficient=0.52 and $p<0.001$). It indicates that the proportion of independent directors on the board is positively related to the predictability of earnings. It shows that the higher percentage of independent directors on the board increases the ability of current earnings to predict future cash flow.

In Model F.1.1, when feedback value is used as a second proxy for earnings quality, the results show that the coefficient for the BODIND is positively significant (coefficient=0.013 and $p<0.01$). A possible explanation is that when the proportion of independent directors on the board is increased, the feedback value increases, which leads to the high quality of earnings.

This study supports the agency theory which proposes that the independence of non-executive directors play an essential role in monitoring and supervising management, due to the assumption that they are independent, have a source of experience, an expert knowledge, incentives, and abilities and concerned with their reputations (Fama & Jensen, 1983). Moreover, resource dependence theory holds the view that the board is a fundamental assistant of the firm. It is essential to have linkages with the external environment to access more resources to improve firm success (Pfeffer & Salancik, 2003). Thus, the existence of independent directors on the board motivates management to provide investors with the high quality of earnings which may be able to predict future cash flow.

This result is generally consistent with the study of Kantudu and Samila (2015) that shows independent directors which as measured by the proportion of independent non-executive directors on the board are positively associated but statistically significant at 10% level of significance with primary and secondary qualitative characteristics of accounting information. It is also in line with Mashayekhi and Bazaz (2010). They reveal

that an increase in the number of independent directors strengthens the earnings quality of the firm in terms of earnings predictability.

However, this result contradicts the previous Malaysian findings by Al-Dhamari and Ku Ismail (2013, 2014) who reported a low predictive value of earnings for firms with a higher percentage of independent non-executive directors on the board.

In Model N.1.1, by using abnormal accrual as a proxy for earnings quality, this study finds that BODIND is significantly and negatively related to the abnormal accrual (coefficient = -0.06 and $p < 0.01$) (Table 5.7). The result indicates that the board with a higher percentage of independent directors is more effective in monitoring and controlling the opportunistic behaviour of top executives, then, earnings will be neutral and faithfully represented.

It is expected that independent directors will be more effective than non-independent directors in enhancing monitoring management and FRQ which then leads to more reliable financial statements (Fama & Jensen, 1983; Gupta & Fields, 2009; Jaggi et al., 2009). It is consistent with the agency theory which states that a more independent board would perform a better monitoring function, which would consequently lead to a higher level of earnings quality by mitigating aggressive actions of management and curtailing the magnitude of earnings management.

It is consistent with other research such as Klein (2002a), Xie et al. (2003), Davidson et al. (2005), Peasnell et al. (2005), Niu (2006), Benkel, et al. (2006), Jaggi, Leung and Gul (2009), Habbash (2010), Dimitropoulos and Asteriou (2010), Alghamdi (2012), Gonzalez and Gearcia-Meca (2014), and Alves (2014) which find a negative association between abnormal accrual and the level of BODIND. The finding also supports a previous Malaysian finding by Jamaludin et al. (2015) who indicates the negative relationship between BODIND and abnormal accrual and affirms that BODIND can be as a tool to deter earnings management.

However, the result is inconsistent with Osma and Noguera (2007). They found that a reduction in the proportion of independent directors is related to declines in abnormal accrual as a proxy for earnings management magnitude. The finding of this study is also not consistent with prior studies in Malaysia such as Abdul Rahman and Ali (2006), Bradbury et al. (2006), and Alkdai and Hanefah (2012). They propose that independent directors in Malaysia do not help strengthen the quality of earnings.

(c) Non-CEO Duality and Earnings Quality (Hypothesis 1c)

Non-duality CEO is another crucial factor in board characteristics that may have an impact on earnings quality. Many studies have been conducted in this area. They are different in findings.

H1c: There is a relationship between non-CEO duality and earnings quality.

H1c assumes the relationship between non-CEO duality and earnings. Based on three proxies measuring earnings quality, this study uses three models including predictive value model ((Model P.1.1), feedback value model (Model F.1.1), and neutrality model (Model N.1.1) to test H1c.

Table 5.7 shows that the relationship between non-CEO duality and earnings quality is significant for all models. However, signs are different, which are described in the following paragraphs.

When the predictive value model (P.1.1) is used as a proxy for earnings quality, the coefficient for non-CEO duality is significant and positive as Table 5.7. (Coefficient=0.181 and $p < 0.01$). It indicates that the non-CEO duality is positively related to the predictability of earnings. It shows that when there is a separation between the CEO and chairman, the ability of current earnings to predict future cash flows is increased.

In Model F.1.1, when feedback value is used as a second proxy for earnings quality, the results show the coefficient for the non-CEO duality is positively significant (Table

5.7: coefficient=0.058 and $p<0.05$). A possible explanation is that when there is non-CEO duality, the feedback value increases, which leads to the high quality of earnings.

This finding is also consistent with agency theory that CEO duality increase agency problems by allowing the CEO to affect control decisions in their interest in order to increase his/her benefits rather than maximise the wealth of shareholders (Jensen, 1993). These results are consistent with Kantudu and Samaila (2015) who indicate that non-duality CEO has a positive relationship with FRQ and statistically significant at a level of 1%.

It means that separation of power between the CEO and the chairman improves the quality of financial report based on qualitative characteristics defined by FASB/IASB. This result is in line with the previous findings of Al-Dhamari and Ku Ismail in 2013 and 2014 who documented that earnings numbers of firms with independent chairmen (non-CEO duality) have predictive value. However, it is inconsistent with Mashayekhi and Bazaz (2010) who did not find any significant association between non-CEO duality and predictability of earnings.

By running the Model N.1.1, concerning the effect of the non-CEO duality on abnormal accrual, the results indicate negative and significant impacts on abnormal accrual (Table 5.7: coefficient =-0.086 and $p<0.001$). This evidence supports the agency theory. It asserts that CEO duality is problematic since the same individual would be responsible for the performance of the firm and the evaluation of efficiency. From the agency view, CEO duality allows the CEO to have control over the board. Thus, the monitoring task of the board is reduced, which may result in inadequate supervision over the management for opportunistic behaviour. It leads to manipulating the earnings, and then there would be no faithful representation of earnings.

This finding is consistent with earlier research such as Klein (2002a), Saleh et al. (2005), Sarkar et al. (2008), Murhadi (2009), Gulzar (2011), Prencipe and Bar-Yosef

(2011), and Boulila Taktak and Mbarki (2014). They found that earnings management is lower when the chair of the board does not hold the CEO position. However, in Malaysia, Abdul Rahman and Ali (2006) could not find a relationship in this regard.

On the other hand, these findings are inconsistent with prior empirical studies. For example, Xie et al. (2003), Peasnell et al. (2005), and Cornett et al. (2008) find a negative relationship between CEO duality and earnings management. Although the codes of CG of many countries recommend separating the roles of chairman and CEO, CEO duality may influence earnings quality positively. The opposite association is because the chairman is performing well in those countries. They believe that if the chairman is committed to performing his duties well, it will give some advantages even if he/she is not independent of the CEO (Coombes & Wong, 2004).

(d) Frequency of Board Meeting and Earnings Quality (Hypothesis 1d)

In urgent business or particular circumstances, the frequency of board meetings (BODMEET) indicates the activity level of the board. Such conditions cause that the management feels the presence of the shareholders. There are a few numbers of studies to consider the board meetings as the main feature of the board of directors.

H1d: There is a relationship between the frequency of board meetings and earnings quality.

Concerning three proxies measuring earnings quality, this study uses three following models to test H1d. These models consist of P.1.1, F.1.1, and N.1.1, as mentioned previously.

By analysing Model P.1.1 and Model F.1.1, the coefficients for the frequency of board meetings are found significant and positive as 0.018 and 0.082 respectively at the significant level of 0.05 (as shown in Table 5.7). It indicates that the frequency of board meetings is related to the predictability of earnings and feedback value of earnings. It

indicates that the ability of current earnings to predict future cash flows and also the ability of information to influence decisions by confirming or correcting earlier expectations of decision-makers (feedback value) is changed with the frequency of board meetings.

These findings support agency theory in which board meeting frequency is considered as an essential dimension for board activity (Vafeas, 1999). These results also support the arguments by Kamardin and Haron (2011). They explained that a large number of board meetings indicate that directors have information about the firm's activities and can monitor the strategy of the firm. Moreover, they are consistent with the study that has been carried out by Mashayekhi and Bazaz (2010) in Iran when they measured earnings quality by earnings predictability. They suggested that increasing the board meetings, which may lead to a more productive discussion between directors on the board, will improve the FRQ and hence earnings quality.

However, this result is not consistent with the study by Kantudu and Samaila (2015) which showed that board meeting had an insignificant negative relationship with FRQ in Nigeria when they measured FRQ based on qualitative characteristics defined by FASB/IASB.

The result obtained from the Model N.1.1 in Table 5.7 shows that there is a positive and insignificant association (coefficient =0.010) between the BODMEET and ABNAC as the indicator of earnings quality. It means this study did not find any significant influence on the frequency of board meetings on neutrality as a dimension of a faithful representation of earnings.

This result does not support the argument of Lipton and Lorsch (1992). They point out that directors on boards that meet frequently are more likely to discharge their responsibilities in line with the interest of shareholders because they devote more time to

controlling problems such as earnings management, conflicts of interest, and monitoring management.

The results also contradict the studies undertaken by Xie et al. (2003), Sarkar et al. (2008), Alghamdi (2012), and Gonzalez and Garcia-Meca (2014) who highlight that a board that meets frequently may have time to look at issues such as earnings management. Their results conclude that abnormal accrual is significantly negatively associated with the number of the board meeting.

This result is in line with the earlier findings of Ebrahim (2007) and Habbash (2010) who documented that the number of the meeting may not restrict earnings management practices. Habbash (2010) justified his finding by stating that frequent meetings may not always be a characteristic of an active board of director.

The results of this study show an insignificant effect of board meetings on abnormal accrual. One possible interpretation of this result is that the board delegates some of its tasks to the specialised committees. Therefore, monitoring FRQ is one of the primary duties of the audit committee. Another explanation for this finding is that the number of the board meeting is more related to critical business events and the firm's particular circumstances than the regular financial reporting decisions. This explanation is supported empirically by Vafeas (1999), who provides evidence that the number of board meeting increases following financial distress. This study can also attribute the negative relationship between board meetings and the earnings quality to the exclusion of financial expert as one of the variables of the study. Moreover, according to Jensen (1993), the board meeting cannot always be used in determining board's effectiveness because other factors of the board meeting are also important such as length of the meeting, which should be considered. The last reason can be due to using a different sample and period for this study.

(e) Board Quality and Earnings Quality (Hypothesis 1e)

In addition to conducting the effect of each characteristic of the board on earnings quality, board quality is considered as an alternative, independent variable which is measured by composite score consists of four main characteristics of the board (see Chapter 4, Section 4.6.1.1).

H1e: There is a relationship between board quality and earnings quality.

Depending on different proxies of earnings quality, Model P.1.2, Model F.1.2 and Model N.1.2 are used to test H1e (association between board quality and earnings quality).

From the analyses conducted by this study, for board quality, the relationship is significant for all earnings quality proxies.

In Model P.1.2, when the predictive value of earnings (current earnings-future cash flow relation) is used as a proxy for earnings quality, the coefficient for board quality is significant and positive as Table 5.7 (coefficient =0.048 and $p<0.05$). It indicates that board governance is positively related to the predictability of earnings. It shows that high board quality increases the ability of current earnings to predict future cash flows.

In Model F.1.2, when feedback value is used as a second proxy for earnings quality, the results show the coefficient for the board quality is positively significant (coefficient =0.010 and $p<0.05$). A possible explanation is that when the board quality is high, the feedback value is increased and leads to the high quality of earnings.

In Model N.1.2, by using abnormal accrual as a proxy for earnings quality, this study finds that board quality is significantly and negatively related to the abnormal accrual (coefficient = -0.045 and $p<0.001$). The result indicates that the board with high quality is more effective in monitoring and controlling the aggressive behaviour of top management; then, earnings will be neutral and faithfully represented.

This study supports the agency theory, which proposes that boards will improve the financial reporting quality by monitoring management. Corporate boards are responsible for monitoring managerial actions, notably those related to performance and FRQ (Karamanou & Vafeas, 2005).

Generally, this finding is consistent with Krismiaji et al. (2016) who states that board governance is positively associated with relevance and faithful representation of accounting information. He states that board governance as a useful monitoring tool will ensure that relevant information will be produced by the company and then will increase the usefulness of the information.

5.6.1.2 Results and Discussion: Audit Committee Characteristics and Earnings Quality (Hypothesis 2)

H2: There is a relationship between audit committee characteristics and earnings quality.

In terms of audit committee characteristics, this study empirically tests the effects of audit committee size, audit committee independence, the frequency of audit committee meeting and audit committee expertise on predictive value, feedback value and abnormal accrual as dimensions of earnings quality.

(a) Audit Committee Size and Earnings Quality (Hypothesis 2a)

Concerning the audit committee characteristics, audit committee size is an effective factor that may have an impact on earnings quality. Many studies have been conducted in this area. However, they have different results.

H2a: There is a relationship between audit committee size and earnings quality.

Based on different proxies to measure earnings quality, the models P.2.1, F.2.1, N.2.1 are used to test H2a.

In Model P.2.1, when the predictive value of earnings (current earnings-future cash flow relation) is used as a proxy for earnings quality, the coefficient for audit committee size is insignificant but positive as shown by Table 5.8 (coefficient =0.032). It indicates that the audit committee size is not related to the predictability of earnings.

This result is not consistent with the theoretical arguments of agency theory and resource dependence theory. Agency theory and resource dependence theory respectively state larger audit committee may provide more oversight and better monitoring over the financial reporting process (Lin, Li, & Yang, 2006) and may receive more resources (Pincus et al., 1989). It contradicts Kalbers and Fogarty (1993) who enumerate the importance of audit committee power which may be reflected in the size of the committee.

In Model F.2.1, when feedback value is used as a second proxy for earnings quality, no significant relationship is found between audit committee size and feedback value of earnings (Table 5.8: coefficient =0.004). However, although no statistically significant relationship is detected for two models, a positive directional sign of the coefficient is observed which lends modest support to the explanation that large audit committees may improve the predictive value and feedback value of earnings.

In Model N.2.1, by using abnormal accrual as a proxy for earnings quality, this study finds that audit committee size is significantly and positively related to the abnormal accrual (Table 5.8: coefficient =0.037 and $p < 0.001$). It means that when the audit committee size increases, the neutrality of earnings decreases.

Table 5.8: Results of the Relationship between Audit Committee Characteristics and Earnings Quality

GLS Regression							
RQ1	Usefulness of Earnings	Earnings quality based on primary qualitative characteristics of accounting information					
	Attribute	Relevance				Faithful Representation	
H2	Components	Predictive Value		Feedback Value		Neutrality	
	Proxies	$(OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t})$		(FV)		(ABNAC)	
	Models	P2.1	P2.2	F2.1	F2.2	N2.1	N2.2
	Independent Variables	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)
	EARN t	1.658*** (5.58)	2.039*** (5.34)				
H2a	EARN*ACSIZE	.032 (0.9)					
H2b	EARN*ACIND	.966*** (7.25)					
H2c	EARN*ACMEET	.071*** (3.37)					
H2d	EARN*ACEXP	-.174 (-1.55)					
H2e	EARN*ACQ		.134* (1.58)				
	EARN*FIRMSIZE	.234*** (13.3)	.217*** (12.92)				
	EARN*GWTH	.023 (0.23)	-.038 (-0.41)				
	EARN*YE-2008	.163* (2.23)	.169* (2.38)				
	EARN*YE-2009	.547*** (6.92)	.528*** (6.72)				
	EARN*YE-2010	.262*** (3.67)	.244*** (3.51)				
	EARN*YE-2011	-.034 (-0.2)	.035 (0.56)				
	EARN*YE-2012	.256*** (3.78)	.197** (3.01)				
	EARN*YE-2013	.165*** (1.5)	.173*** (2.5)				
H2a	ACSIZE			.004 (0.46)		.037*** (10.2)	
H2b	ACIND			.005 (1.24)		-.021* (-1.8)	
H2c	ACMEET			.041*** (3.8)		-.010*** (-4.9)	
H2d	ACEXP			-.0003 (-0.13)		.0048 (0.72)	
H2e	ACQ				.0018* (1.16)		-.041** (3.15)
	FIRMSIZE			.001* (2.23)	-.000 (-0.85)	-.068*** (-5.16)	-.064*** (-4.88)
	GWTH			.000 (0.13)	.000 (0.32)	.003 (0.31)	.005 (0.38)
	YE-2008			-.009*** (-4.53)	-.012*** (-7.98)	.007 (1.28)	.004 (0.64)
	YE-2009			-.009*** (-4.53)	-.012*** (-8.19)	.0125* (2.25)	.0038 (0.51)

Table 5.8, continued

GLS Regression							
	P2.1	P2.2	F2.1	F2.2	N2.1	N2.2	
YE-2010			-.009*** (-4.27)	-.011*** (-7.6)	.011* (2.15)	.008 (1.17)	
YE-2011			-.009*** (-4.54)	-.013*** (-8.5)	.020*** (3.68)	.011 (1.52)	
YE-2012			-.008*** (4.1)	-.011*** (-7.21)	.012* (2.21)	.013 (1.81)	
YE-2013			-.007*** (3.8)	-.012*** (-7.8)	.032* (4.2)	.014 (1.92)	
INTERCEPT	17737.9*** (20.75)	18438.8*** (21.55)	.000 (0.3)	.011 (1.58)	1.13*** (4.01)	1.06*** (1.48)	
R ²	0.693	0.687	0.017	0.013	0.155	0.175	
WALD CHI2	2975.27	2823.71	68.12	54.75	58.46	66.83	
legend: * p<0.05; ** p<0.01; *** p<0.001 Number of Groups: 483 Number of Observations: 3388							

This study reveals that smaller audit committees are more likely to be associated with high earnings quality. When the audit committee size is small, they are more effective monitors because they do not have coordination and communication problems (Aldamen et al., 2012). This result does not support the agency theory and resource dependence theory which suggests that larger audit committees would effectively monitor and bring more external resources to enhance FRQ.

This result is inconsistent with prior research that finds that larger audit committees are associated with lower quarterly earnings management (Yang & Krishnan, 2005), fewer earnings restatements (Lin et al., 2006) and enhanced FRQ (Felo et al., 2003).

Moreover, this result is not similar to studies, such as Xie et al. (2003), Abbott et al. (2004), Bédard et al. (2004), Davidson et al. (2005), and Baxter and Cotter (2009), which examined the influence of audit committee size on earnings management. They failed to find a significant impact of audit committee size on earnings management.

The findings are consistent with the results of Almasrawah (2015) who found a positive relationship between audit committee size and earnings management in Jordanian firms.

As compared to prior Malaysian studies, the results are contradicted to Wan Ismail et al. (2010) who showed that for non-family firms, there is a significant positive association between earnings quality and audit committee size. Besides, their study shows there is no significant association between earnings quality and audit committee size for the full sample of Malaysian firms. The result is consistent with Al-Rassas and Kamardin (2015b). They state that large audit committee size is associated with lower earnings quality (higher abnormal accruals) in Malaysia Main Market listed companies from the year 2009 to 2012.

The plausible explanation on this contradictory may be due to the different research design. Another interpretation for this finding is that some of the Malaysian firms are family-owned businesses. Then, the number of audit committee member alone could not be as an effective factor for assessing its effectiveness. It seems that audit committee members' education, experiences, and expertise can be more important than the only audit committee size.

(b) Audit Committee Independence and Earnings Quality (Hypothesis 2b)

Audit committee independence is another characteristic of the audit committee that was given attention in this research.

H2b: There is a relationship between audit committee independence and earnings quality.

Concerning the three proxies, three following models are used to test H2b.

When the predictive value of earnings (current earnings-future cash flow relation) is used as a proxy for earnings quality by Model P.2.1, the coefficient for audit committee independence is significant and positive as Table 5.8 (coefficient =0.96 and $p < 0.001$). It shows that the audit committee independence is positively related to the predictability of

earnings. Moreover, the high coefficient shows that there is a strong relationship between the audit committee independence and the ability of earnings to predict future cash flows.

When feedback value is used as a second proxy for earnings quality by Model F.2.1, no significant relationship is found between audit committee independence and feedback value of earnings as Table 5.8 (coefficient =0.005). However, although there is no significant relationship between them, a positive directional sign of the coefficient is observed which may support modestly to the argument that the high proportion of independent directors on audit committees may enhance feedback value of earnings.

It is consistent with the agency theory and resource dependence theory. Agency theory supports the view that the existences of independence non-executive members in audit committee enhance their effectiveness in monitoring role and offer good governance in ensuring the quality of financial statements. Additionally, resource dependence theory believes that independent directors increase resources and enhance status will make the audit committee more effective in fulfilling its monitoring duty. It means the audit committee will effectively monitor managerial functions and decisions relating to the preparation of qualified financial statements (Klein, 2002b; Abbott et al., 2004).

The findings from this study are not consistent with Al-Dhamari and Ku Ismail (2012, 2013) who argued that audit committee independence has no significant influence on one-year-ahead operating cash flows.

To examine the association between audit committee independence and neutrality as a component of faithful representation, Model N.2.1 is utilised. The result, as shown in Table 5.8, indicates a significant negative association between audit committee independence and abnormal accrual (coefficient =-0.021 and $p < 0.05$). It means audit committee independence increases neutrality and then the faithful representation of earnings.

This result supports the argument that an audit committee which comprises of a majority of independent directors reduces the opportunistic and self-interested manipulation of financial information by managers and is negatively related with abnormal accruals as a proxy for earnings quality (Klein, 2002a; Bédard et al., 2004; Yang & Krishnan, 2005; Davidson et al., 2005; Benkel et al., 2006; Bradbury, 2006; Baxter & Cotter, 2009; Chang & Sun, 2010; Habbash, 2010; Yunos, 2011; Liu et al., 2013; Soliman, 2014).

It is also because independent audit committee members provide more objective monitoring of the company's financial reporting relative to other members as they do not have personal interests in the company. Besides, the independent members are committed to performing their monitoring role in order to preserve and develop their reputation. Compared to other audit committee members, independent members are also more encouraged to avoid activities destroying their reputation (Abbott et al., 2000; Abbott et al., 2003). Consistent with this argument, Anderson et al. (2003) and Lin et al. (2006) state that the existence of the audit committee with independent directors is deemed to improve the credibility and reliability of disclosed earnings figures.

Consistently, Bradbury et al. (2006) in Malaysia and Singapore found a significant reduction in the level of income-increasing accruals in companies with fully independent audit committee members. Saleh et al. (2007) also show that the presence of a fully independent audit committee reduces earnings management practices of Malaysian firms.

This result fundamentally contradicts Fodio et al. (2013) and Kantudu (2015). They revealed that audit committee independence has a positive association with discretionary accruals and might not decrease the extent of earnings manipulation by managers. Moreover, this result is not consistent with Davidson et al. (2005), Lin et al. (2006), Abdul Rahman and Ali et al. (2006), Petra (2007), Siregar and Utama (2008), and Alghamdi (2012) find that audit committee independence has no relationship with discretionary accruals. Their results are unexpected since the audit committee oversees the reporting

process as well as the internal control mechanism within an organisation. Their result may be influenced either by different types of earnings management or the small size of their sample.

(c) Frequency of Audit Committee Meetings and Earnings Quality (Hypothesis 2c)

Audit committee meetings (ACMEET) is a significant proxy for the audit committee characteristics. For this reason, it is considered in this study to examine the effect of audit committee characteristics on earnings quality.

H2c: There is a relationship between the frequency of audit committee meeting and earnings quality.

Since this study uses three proxies to measure earnings quality, three models are used in this study as P.2.1, F.2.1, N.2.1 to test H2c.

As shown in Table 5.8, the coefficient for ACMEET is significantly positive for two earnings quality proxies, the predictive value of earnings (coefficient =0.071 and $p<0.001$) and feedback value of earnings (coefficient =0.041 and $p<0.001$). It shows that the ACMEET is positively related to the predictability of earnings and feedback value of earnings.

This result may support the argument that the number of audit committee meeting significantly enhance the FRQ. The meetings held by the audit committee provide the members with knowledge and information about relevant accounting and auditing concerns (Raghunandan et al., 2001), and enable them to analyse and decide appropriate actions to overcome reporting issues (Abbott et al., 2003). Consistent with this notion, Anderson et al. (2003) and Firth et al. (2007) provide evidence that firms whose audit committees hold frequent meetings report informative earnings numbers.

The finding of this study, however, does not support Al-Dhamari and Ku Ismail (2013) who concluded that the frequency of audit committee meeting has an insignificant and negative influence on the predictability of earnings.

The coefficient for the audit committee meeting is significantly negative for abnormal accrual as a proxy for earnings quality (Table 5.8, Model N.2.1: coefficient = -0.0102 and $p < 0.001$). It shows that diligent and active audit committees are associated with lower earnings management and higher neutrality of earnings.

The results of current research support arguments prescribed by the agency theory. According to this theory, audit committees' diligence and effectiveness will be more significant in monitoring the financial reporting of the firms if they were to meet more frequently, resulting in enhancement within the internal monitoring process. During the audit committee meeting, the problems encountered in the financial reporting process are identified. As established by prior literature, if audit committee is held less frequently, the problems cannot be corrected and resolved in a short period (Raghunandan et al., 2001; Abbott et al., 2004).

The results of this study are also consistent with prior studies in which companies with more frequent audit committee meetings are more likely to have a lower tendency of earnings management (Xie et al., 2003; Garcia et al., 2010; Liu et al., 2013). Additionally, the result of this study is consistent with Chtourou et al. (2001) and Soliman (2014) who find that audit committee whose members meet regularly reduce the ability of management to manipulate earnings and hence enhance earnings quality.

The findings of this study do not support the findings of Bédard et al. (2004), Bryan et al. (2004), Davidson et al. (2005), Baxter and Cotter (2009) and Aghamadi (2012). They found that a higher number of audit committee meetings are unable to constrain earnings management and to improve earnings quality.

In the Malaysian context, the result of this study contradicts the findings by Al-Rassas and Kamardin (2015b) who showed that a more frequent audit committee meetings are associated with lower earnings quality (higher abnormal accrual). Moreover, it does not support Abdul Rahman and Ali in 2006, who concluded that ACMEET has an insignificant but negative role in preventing the earnings management's incidence in Malaysia. However, the finding of this study supports the Malaysian study by Saleh et al. (2007), who stated that audit committee members with more ACMEET revealed fewer earnings management practices compared to other companies.

(d) Audit Committee Expertise and Earnings Quality (Hypothesis 2d)

It has been established that the accounting qualification and financial literacy of audit committee members are other factors that help the audit committee effectively discharge its oversight duties (Lin et al., 2006).

H2d: There is a relationship between the audit committee financial expertise and earnings quality.

This section indicates the result of the examination of the association between audit committee expertise (ACEXP) and earnings quality based on different proxies to measure earnings quality (predictive value, feedback value, neutrality). Therefore, three different models are developed as P.2.1, F.2.1, N.2.1 to test H2d.

The coefficient for ACEXP in Model P.2.1 and Model F.2.1 is non-significant as Table 5.8 (coefficient = -0.174 and -0.0003). It indicates that the ACEXP is not related to the predictability of earnings and feedback value of earnings.

On this respect, the finding of this study does not support the agency theory which states that accounting expertise contributes to the more excellent monitoring by the members of the audit committee, which enhances multiple attributes of the financial reporting quality (Defond et al., 2005, Song & Windram, 2004; Carcello et al., 2008;

Adiguzel, 2013). It is also inconsistent with Resource Dependence Theory, which states that audit committee is a resource for organisations, bringing with themselves expertise and experience for firms, enabling organisations to gain competitive advantage especially in financial reporting quality (Puat Nelson & Devi, 2013). Likewise, it does not support the study by Mangena and Tauringana (2008). They state that knowledgeable audit committee members are in a better position to understand financial reporting issues and auditor judgments. It can provide better monitoring of the financial reporting process and then high financial reporting quality. The result of this study is consistent with Al-Dhamari and Ku Ismail (2013) in Malaysia who state the fact that audit committee financial expertise has an insignificant influence on the predictive ability of earnings.

In Model N.2.1, by using abnormal accrual as a proxy for earnings quality, this study finds that ACEXP is not related to the abnormal accrual as a measure of neutrality of earnings (Table 5.8: coefficient =0.0048. It reveals that the audit committee with more expertise is not associated with high earnings quality.

These findings are consistent with the results of some studies regarding FRQ which conclude that neither financial expertise nor accounting experience can ensure disclosing earnings numbers of high quality (Chtourou et al., 2001; Johari et al., 2008). It is also similar to Alghamdi (2012) in Saudi Arabia and Abdul Rahman and Ali (2006) in Malaysia who state that audit committee financial expertise has an insignificant role in preventing the incidence of earnings management.

The finding of this study is not in line with agency theory. This theory states that an audit committee whose members are competent and qualified is expected to be more active in overseeing the process of financial reporting and internal controls and mitigating the agency problem that arises from the managers' ability to manipulate earnings reports (Blue Ribbon Committee, 1999; Nelson & rich, 2011). Moreover, it does not support the resource dependence theory. RDT explains that due to the broader expertise and

knowledge audit committee can provide, as well as improved networking with the external environment and a generally improved reputation, a lower magnitude of earnings management will be caused (Haniffa & Cooke, 2002; Haniffa & Hudaib, 2006).

It is not consistent with the findings of studies which believe that ACEXP is an essential factor in constraining the tendency of managers to engage in earnings manipulation (Xie et al., 2003; Bédard et al., 2004; Abbott et al., 2004; Agrawal & Chadha, 2005; Yang & Krishnan, 2005; Dhaliwal et al. 2006).

(e) Audit Committee Quality and Earnings Quality (Hypothesis 2e)

Audit committee quality (ACQ) is considered as another independent variable to examine the association between ACQ and earnings quality. Composite score consisting of four main audit committee characteristics is calculated to measure the audit committee quality (see Chapter 4, Section 4.6.2.1).

H2e: There is a relationship between audit committee quality and earnings quality.

This section indicates the result of the examination of the association between ACQ and earnings quality based on different proxies to measure earnings quality (predictive value, feedback value, neutrality). Therefore, three different models are developed as P.2.2, F.2.2, N.2.2 to test the hypothesis mentioned above.

Based on Table 5.8, the coefficient of ACQ in Model P.2.2 (coefficient =0.134) and Model F.2.2 (coefficient=0.0018) is positive and significant ($P < 0.05$). It indicates that the audit committee quality is related to the predictability of earnings and feedback value of earnings.

It supports the agency theory, which expects the audit committee to oversee and monitor the integrity of financial reporting. It is consistent with the argument by Gendron and Bedard (2006). They stated that the effectiveness of audit committees in monitoring the financial reporting process is one of the most significant themes in the CG mechanism.

In Model N.2.2, by using abnormal accrual as a proxy for earnings quality, this study finds that ACQ is negatively related to the abnormal accrual (coefficient =-0.041 and $p < 0.01$). This study reveals that ACQ is positively associated with neutrality and faithful representation of earnings. It is consistent with Cohen et al. (2004) who argue that an effective audit committee can help the auditor be more aggressive in curtailing excessive management opportunistic behaviour.

5.6.1.3 Results and Discussion: Internal Audit Characteristics and Earnings Quality (Hypothesis 3)

H3: There is a relationship between internal audit characteristics and earnings quality.

In the following section, this study presents the results of the relationship between internal audit characteristics (experience and independence) and earnings quality proxies.

(a) Internal Audit Experience and Earnings Quality (Hypothesis 3a)

Concerning the internal audit characteristics, an experienced internal auditor can assure the effectiveness and efficiency of internal audit function (IAF).

H3a: There is a relationship between internal audit experience and earnings quality.

This section classifies the findings into three subsections based on different proxies to measure earnings quality (predictive value, feedback value, neutrality). The results for these variables by developing the models P.3.1, F.3.1, .N.3.1 are presented below in Table 5.9 to test H3a.

In Model P.3.1, when the predictive value of earnings (current earnings-future cash flow relation) is used as a proxy for earnings quality, the coefficient for internal audit experience (IAEXP) is significant but positive as Table 5.9 (coefficient =0.027 and $p < 0.05$). It indicates that the IAEXP is positively related to the predictability of earnings.

Table 5.9: Results of the Relationship between Internal Audit Characteristics and Earnings Quality

GLS Regression							
RQ1	Usefulness of Earnings	Earnings quality based on primary qualitative characteristics of accounting information					
	Attribute	Relevance				Faithful Representation	
H3	Components	Predictive Value		Feedback Value		Neutrality	
	Proxies	$(OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t})$		(FV)		(ABNAC)	
	Models	P3.1	P3.2	F3.1	F3.2	N3.1	N3.2
	Independent Variables	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)
	EARN t	.494*** (10.7)	2.530*** (-10.5)				
H3a	EARN*IAEXP	.027* (2.45)					
H3b	EARN*IAIND	-.120** (-2.8)					
H3c	EARN*IAQ		-.008 (-0.23)				
	EARN*FIRMSIZE	.204*** (11.87)	.216*** (12.73)				
	EARN*GWTH	.056 (0.65)	-.022 (-0.24)				
	EARN*YE-2008	.121 (1.7)	.145* (2.07)				
	EARN*YE-2009	.469*** (5.83)	.516*** (6.43)				
	EARN*YE-2010	.114 (1.5)	.224** (2.92)				
	EARN*YE-2011	-.083 (-1.05)	.037 (0.5)				
	EARN*YE-2012	.021 (0.25)	.179* (2.3)				
	EARN*YE-2013	.074 (1.01)	.095* (1.5)				
	IAEXP			.0001 (0.5)		-.057*** (4.15)	
	IAIND			-0.002* (-2.52)		.041*** (9.96)	
	IAQ				-.0011 (-1.44)		.037*** (9.98)
	FIRMSIZE			-.0005 (-1.67)	-.0002 (-0.71)	.0629 (-4.9)	-.062*** (-4.23)
	GWTH			.002 (0.77)	.001 (0.38)	.003 (0.25)	.001 (0.12)
	YE-2008			-.010*** (-7.34)	-.011*** (-7.4)	.0001 (-0.3)	.004 (0.62)
	YE-2009			-.011*** (-7.36)	-.011*** (-7.25)	-.014 (-0.82)	-.009 (-1.24)
	YE-2010			-.009*** (-6.19)	-.009*** (-5.95)	-.010 (-1.34)	-.019* (-2.51)
	YE-2011			-.011*** (-6.85)	-.011*** (-6.55)	-.010 (-1.29)	-.023** (-2.93)
	YE-2012			-.010*** (-5.69)	-.009*** (-5.46)	-.022 (-2.4)	-.027** (-3.35)
	YE-2013			-.011*** (-6.5)	-.010*** (-5.85)	-.015 (-1.76)	-.025** (-3.75)

Table 5.9, continued

GLS Regression							
		P3.1	P3.2	F3.1	F3.2	N3.1	N3.2
	INTERCEPT	18990.3*** (22.21)	18318.6*** (21.35)	.021*** (4.65)	.017*** (3.86)	1.177*** (6.78)	1.202*** (6.58)
	R ²	0.686	0.686	0.08	0.03	0.209	0.194
	WALD CHI2	2862.3	2831.14	65.46	68.42	74.36	70.11
legend: * p<0.05; ** p<0.01; *** p<0.001 Number of Groups: 483 Number of Observations: 3388							

In Model F.3.1, when feedback value is used as a second proxy for earnings quality, there is no significant relationship between IAEXP and feedback value of earnings (coefficient =0.0001). However, although there is no statistically significant relationship for this model, a positive directional sign of the coefficient provides modest support to the connotation that an internal audit with experience may improve feedback value of earnings.

This result is consistent with agency theory which states that not only the existence of internal audit in organisations can improve the effectiveness and efficiency of organisational controls in aligning with organisational strategies but also some of the characteristics of the internal audit department (e.g. internal audit experience) can promote the effectiveness of internal audit function (Adams, 1994, Lin et al., 2011). This result supports Mat Zain et al. (2006) who find that internal auditors contribute more to financial statement audits and FRQ when they have a higher proportion of internal audit staff with prior experience in accounting and auditing.

In Model N.3.1, by using the abnormal accrual as a proxy for earnings quality, this study finds that IAEXP is significantly and negatively related to the abnormal accrual and positively related to the neutrality of earnings (coefficient = -0.057 and p<0.001). This study reveals that an internal audit with more experience is more likely to be associated with high earnings quality.

This finding is consistent with the argument by DeZoort (1998) who explain that experienced internal audit members were knowledgeable about the areas being audited; therefore, they either understood management's motivation for manipulation of earnings or realised the potential areas of fraud. However, this contradicts the result by Johl et al. (2013) who studied the relationship between internal audit quality and earnings management. By using the data of Malaysia in 2009 and 2010, they found that the association between internal audit experience and abnormal accruals is positive, which was somewhat unexpected. Moreover, it is in contrast to the insignificant findings of Prawitt et al. (2009) who investigated the association between internal audit quality (experience and qualification) and earnings management in the US for the fiscal years 2000 to 2005.

(b) Internal Audit Independence and Earnings Quality (Hypothesis 3b)

As the role of internal auditing is growing in the modern CG, attention was then shifted to independence. Independence has been established as the other vital factor empowering the employees to report the material cases that they discover. They can report these cases with no fear even if the management faults are also disclosed (Al-Shetwi et al., 2011).

H3b: There is a relationship between internal audit independence and earnings quality.

Concerning the three proxies, three following models are used to test H3b.

When the predictive value of earnings (current earnings-future cash flow relation) is used as a proxy for earnings quality by Model P.3.1, the coefficient for internal audit independence (IAIND) is significant and negative as Table 5.9 (coefficient = -0.12 and $p < 0.01$). It shows that the IAIND is negatively related to the predictability of earnings. It means that in-house IAF can influence the ability of earnings to predict future cash flows than outsourced IAF.

Moreover, when feedback value is used as a second proxy for earnings quality by Model F.3.1, significant and negative relationship is found between IAIN and feedback value of earnings as a Table 5.9 (coefficient = -0.002 and $p < 0.05$).

To examine the association between internal audit independence and neutrality as a component of faithful representation, Model N.3.1 is utilised. The result, as shown in Table 5.9, indicates a significant positive association between internal audit independence and abnormal accrual (coefficient = 0.041 and $p < 0.001$). It means IAIN decreases neutrality and then the faithful representation of earnings.

This result is inconsistent with the agency theory's argument. It explains the independent role and responsibilities that are assigned to the IAF so that the agency costs between the investors and managers is reduced, and the financial reporting reliability is ensured (Adams, 1994).

The finding of the current study is consistent with some scholars who argue that in-house IAF leads to greater internal monitoring and control over the audit operations, thereby protecting proprietary information, providing a better understanding of business procedures and associated risks from outsiders compared to an outsourced IAF (Del Vecchio & Clinton, 2003). It is also similar to the findings by Barr and Chang (1993) and Carey et al. (2006). They asserted that in-house IAF is advantageous because of in-depth firm-specific knowledge, loyalty, precious training background, and role in the management of the crises, like the situations involving fraud.

Results of the current work support the findings by Johl et al. (2013); in which if the IAF was to be outsourced, discretionary accruals would increase. Moreover, it is different from the insignificant findings of this variable in Prawitt et al. (2009). However, it is contrary to Al-Rassas and Kamardin (2015a) who reported that the in-house internal audit function (IAF) leads to increased discretionary accruals. His result suggests that outsourced IAF is more expert and professional compared to in-house IAF.

Supposedly, there is a positive association between IAIND and abnormal accrual because the knowledge of the outsourced internal auditors about the business is not as much as the in-house internal auditors. Outsourced internal auditors are not committed to the firm they audit, and may not adapt the auditing approach to the client's situation. All of these factors may decrease their capacity for the detection or deterrence of inappropriate accounting (Grant Thornton 2007; Abott et al., 2016). Additionally, outsourcing all or a part of the IAF allows the management to have flexibility in tailoring IAF costs annually since the nature of the outsourced IAF hours is variable. Subsequently, when the IAF activities are outsourced, the management may be given a chance to defer the expense recognition into the next accounting periods. The management can accomplish it by scheduling outsourced IAF activities into the following years. Such contracting flexibility may be particularly attractive to the management when the company is faced with revenue shortfalls (Abbott et al., 2016).

(c) Internal Audit Quality and Earnings Quality (Hypothesis 3c)

The internal audit quality (IAQ) has the potential to influence CG quality and FRQ (Gramling et al., 2004). For this reason, this study considers IAQ as another independent variable, measured by a composite score consists of two internal audit characteristics (see Chapter 4, Section 4.6.3.1).

H3c: There is a relationship between internal audit quality and earnings quality.

The result of the assessment of the association between IAQ and earnings quality indicated by this section is based on different proxies measuring earnings quality (predictive value, feedback value, neutrality). Therefore, three different models are developed as P.3.2, F.3.2, N.3.2 to test H3c.

When predictive value model (P.3.2) and feedback value model (F.3.2) are used as a proxy for earnings quality, the coefficients of IAQ are insignificant and negative for

predictive and feedback value models (coefficient = -0.008 and -0.001 respectively) as Table 5.9. It indicates that the IAQ is not related to the predictability and feedback value of earnings.

It does not support Al-Shetwi et al. (2011) who states that if the quality of IAF increases, the likelihood of internal control deficiencies will probably decrease. Then, it will lead to high FRQ.

By running the Model N.3.2, concerning the influence of the IAQ on abnormal accrual, the results indicate positive and significant impacts on abnormal accrual (coefficient =0.037 and $p < 0.001$). It means IAQ is likely to have a negative influence on the neutrality of earnings.

This evidence supports Johl et al. (2013) who report that IAQ is positively related to abnormal accruals, showing lower FRQ. However, the findings of this study do not support Prawitt et al. (2009) who state that the IAF often has responsibility for continuous monitoring of management's opportunistic behaviour, especially those associating with financial reporting. They concluded that IAQ plays a more significant role in moderating earnings management than the other aspects of CG.

A possible explanation for this inconsistency is that first, the composite score of IAQ is calculated only by two characteristics which supposed not to be adequate. It is required to consider some other characteristics such as internal audit function organisation independence, internal audit quality control assurance, internal audit financial focus activities and internal audit investment which is collected through questionnaire design (Johl et al. 2013). Second, as can be seen in the descriptive statistics' table, the sample firms show that the average of IAQ is 0.96, the median is 1.00, and it ranges between 0 and 2. This study finds that 47 % of the sample outsource their IAF to an outside provider and 53 % have a full in-house function and the effect of IAINND on earnings quality is negative and significant. Then, IAINND may not play an essential and strong role to

calculate IAQ, and it leads to the mean of IAQ (0.96) to be less than 50% of the total score (2).

5.6.1.4 Results and Discussion: External Audit Characteristics and Earnings Quality (Hypothesis 4)

H4: There is a relationship between external audit characteristics and earnings quality.

This study tests the impact of three characteristics of the external auditor on earnings quality (H4). These characteristics are external audit size, audit fee, and auditor independence. Audit firm size is measured as a dichotomous variable taking the value of 1 if the auditor is among the big four auditors and zero otherwise. External audit independence is also measured by the percentage of audit fee to total fees.

(a) External Audit Size and Earnings Quality (Hypothesis 4a)

As discussed in Section 2.2.3.3, audit firm size (EASIZE) is generally measured as auditor brand name (e.g., Big N). Big N is assumed to provide higher audit quality due to their high competence, thereby increasing earnings quality. Hypothesis 4a examines.

H4a: There is a relationship between external audit size and earnings quality.

Since this study uses three proxies to measure earnings quality, then, three models are used in this study as P.4.1, F.4.1, N.4.1 to test H4a.

Table 5.10 shows that when the predictive value of earnings (current earnings-future cash flow relation) is used as a proxy for earnings quality (Model P.4.1), the coefficient for EASIZE is significant and positive (coefficient =0.316 and $p < 0.001$). It states that the big4 auditors can increase the ability of earnings to predict future cash flows. According to Miko (2015), the Big 4 auditors can provide higher audit quality due to the following

reasons: they have many numbers of clients, many resources, technology and trained employee for the audit task.

It supports the argument by Palmrose (1988), Menon and Williams (1991) and Davidson and Neu (1993). They state that large audit firms perform better auditing services, compared to small audit firms because they have more concern to protect their reputations and more resources. They also argued that the large audit firms are assumed to have more considerable expertise and competency compared to small audit firms which result in the high external audit quality and thereby FRQ.

When feedback value is used as a second proxy for earnings quality by Model F.4.1, there is no significant relationship between EASIZE and feedback value of earnings, as shown in Table 5.10 (coefficient=0.0013). However, a positive directional sign of the coefficient provides modest support to the connotation that a big audit firm may improve feedback value of earnings.

However, in Model N.4.1, the value of the coefficient of EASIZE is not significant (-0.0019) with abnormal accruals. These findings are not consistent with the argument that big brand name audit firms are more likely to resist managerial pressures and confine opportunistic accounting practices. The literature provides mixed results about the relationship between the big brand audit firm (the Big N), and abnormal accrual as a measure of neutrality of earnings.

It supports the studies by Maijoor and Varstraelen (2006) in the UK, Piot and Janin (2007) in French, Sun et al. (2011) in the US, Zehri (2011) in Tunisia, Abdul Rahman and Ali (2006), Al-Rassas and Kamardin (2015b) in Malaysia. They report no significant relationship between Big 4 audit firms and abnormal accrual.

Table 5.10: Results of the Relationship between External Audit Characteristics and Earnings Quality

GLS Regression							
RQ1	Usefulness of Earnings Attribute	Earnings quality based on primary qualitative characteristics of accounting information					
		Relevance				Faithful Representation	
H4	Components	Predictive Value		Feedback Value		Neutrality	
	Proxies	$(OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t})$		(FV)		(ABNAC)	
	Models	P4.1	P4.2	F4.1	F4.2	N4.1	N4.2
	Independent Variables	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)
	EARN t	1.979*** (6.6)	2.557*** (10.94)				
H4a	EARN*EASIZE	.316*** (6.68)					
H4b	EARN*EAFEE	.144*** (3.98)					
H4c	EARN*EAIND	.042* (0.58)					
H4d	EARN*EAQ		.051* (1.99)				
	EARN*FIRMSIZE	.270*** (12.17)	.225*** (13.01)				
	EARN*GWTH	-.225* (-2.1)	.025 (0.28)				
	EARN*YE-2008	.163* (2.26)	.146* (2.09)				
	EARN*YE-2009	.482*** (6.04)	.507*** (6.56)				
	EARN*YE-2010	.204** (2.88)	.214** (3.15)				
	EARN*YE-2011	-.007 (-0.11)	.029 (0.47)				
	EARN*YE-2012	.210** (3.05)	.184** (2.86)				
	EARN*YE-2013	.237** (3.45)	.193** (3.1)				
	EASIZE			.001 (1.37)		-.0019 (-0.37)	
	EAFEE			.001* (2.15)		-.010** (-3.05)	
	EAIND			.076*** (3.66)		-.040*** (-4.75)	
	EAQ				.016** (2.67)		-.029*** (-9.45)
	FIRMSIZE			-.000 (-0.32)	.000 (0.14)	-.061*** (-3.06)	-.057*** (-3.52)
	GWTH			-.000 (-0.07)	.001 (0.43)	.000 (0.06)	-.007 (-0.47)
	YE-2008			-.009*** (-6.46)	-.011*** (-7.38)	.008 (1.2)	.003 (0.4)
	YE-2009			-.010*** (-6.78)	-.011*** (-7.33)	.008 (1.18)	.007 (0.87)
	YE-2010			-.008*** (-5.49)	-.009*** (-6.45)	.009 (1.25)	.007 (1.46)
	YE-2011			-.010*** (-6.73)	-.011*** (-7.78)	.016* (2.25)	.011 (1.76)

Table 5.10, continued

GLS Regression							
		P4.1	P4.2	F4.1	F4.2	N4.1	N4.2
	YE-2012			-.007*** (-5.13)	-.009*** (-6.42)	.017* (2.38)	.014 (1.96)
	YE-2013			-.008*** (-5.73)	-.010*** (-7.68)	.016* (2.25)	.013 (1.85)
	INTERCEPT	18714.2*** (22.76)	18292.5*** (21.23)	.036*** (5.68)	.015*** (3.45)	1.338*** (4.07)	1.203*** (5.36)
	R ²	0.696	0.687	0.011	0.007	0.149	0.203
	WALD CHI2	3395.0	2815.4	65.87	55.61	61.97	50.64
legend: * p<0.05; ** p<0.01; *** p<0.001 Number of Groups: 483 Number of Observations: 3388							

Although there is no significant relationship between them, a negative directional sign of the coefficient is observed, which may support modestly to the argument that the big audit firm may decrease abnormal accrual. It contradicts the studies by Antle et al. (2006), Alves (2013) and Vieira and Madaleno (2019) who report that clients of Big 6 auditors have higher abnormal accruals than clients of other auditors respectively in UK and Portugal.

(b) External Audit Fee and Earnings Quality (Hypothesis 4b)

Audit fees, as a proxy for external audit characteristics, is an essential external monitoring mechanism to increase the quality of earnings. Hypothesis 4b examines the relation between external audit fee (EAFEE) and earnings quality.

H4b: There is a relationship between external audit fee and earnings quality.

Since this study uses three proxies to measure earnings quality, then, three models are used in this study as P.4.1, F.4.1, N.4.1 to test H4b.

When the predictive value of earnings (current earnings-future cash flow relation) is used as a proxy for earnings quality by Model P.4.1, the coefficient for EAFEE is significant and positive as Table 5.10 (coefficient =0.144 and p<0.001). It shows that the EAFEE is positively related to the predictability of earnings.

According to Table 5.10, a positive and significant relationship is found between EAFEE and feedback value of earnings (coefficient =0.0016 and $p<0.05$) when feedback value is used as a second proxy for earnings quality by Model F.4.1.

This result does not support the view of DeAngelo (1981) who states that every auditor should be financially independent of his client. However, when the audit fee is high, it means audit firm relies on a specific client and makes an economic bonding with the client and cannot provide reports against the client then the audit quality is decreased. Hence, FRQ and consequently, earnings quality is decreased.

As can be seen in Model N.4.1 from Table 5.10, EAFEE is significant and negatively related to the abnormal accrual (coefficient =-0.0101 and $p<0.01$), suggesting that firms with higher audit fees are more likely to constrain earnings management and increase the neutrality of earnings. The findings of this study support the view that external audit fees are more likely to reflect auditing efforts, which in turn reduces the likelihood of opportunistic behaviour of management and produce better accrual quality (Srinidhi et al., 2007).

It supports the agency theory, which states that in order to reduce the agency costs between the shareholders (principals) and managers (agent), the firm may pay a higher fee for external auditors to ensure the reliability of the financial reporting and external audit quality (Jensen & Meckling, 1976).

According to O'Sullivan (2000), for a more thorough audit analysis; more audit hours with more specialised audit staff are required. Thus, this will lead to higher external audit fee. Moreover, it is assumed that higher amount of external audit fee indicates a higher external audit quality as more audit task is required to ensure that the financial statements are free from material misstatements (Deis & Giroux, 1996). These results are, therefore, consistent with the arguments provided by Srinidhi et al. (2007). They claim that external

audit fees are more likely to reflect auditing efforts, which in turn produces better accrual quality.

The results are also consistent with some studies such as Frankel et al. (2002), Larcker and Richardson (2004), Basirudin (2011), and Al-Rassas and Kamardin (2015b). They investigated the association between EAFEE and earnings quality. They found that EAFEE is negatively significant with discretionary accrual as a proxy for earnings quality. It supports the hypothesis that high EAFEE can be a proxy for external audit quality and subsequently, enhanced earnings quality. However, the findings of this study contradict the studies by Gul et al. (2003), Antle et al., (2006) who find a positive relationship between EAFEEs and abnormal accrual.

(c) External Audit Independence and Earnings Quality (Hypothesis 4c)

External auditing independence (EAIND) is a crucial factor for shareholders to ensure the quality of earnings. Hypothesis 4c predicts that EAIND is associated with earnings quality.

H4c: There is a relationship between external audit independence and earnings quality.

This section shows the result of the analysing of the association between EAIND and earnings quality based on different proxies measuring earnings quality (predictive value, feedback value, neutrality). Therefore, three different models are developed as P.4.1, F.4.1, N.4.1 to test H4c.

The results obtained from the Model P.4.1 (see Table 5.10) illustrate that the proportion of audit fees to total audit fees is positively related to the predictive value of earnings. Thus, the association between EAIND and the ability of earnings to predict future cash flows is significant and positive (coefficient=0.042, $P < 0.05$).

Similarly, the results of Model F.4.1 which uses feedback value as an alternative dimension of earnings quality as summarised in Table 5.10 suggests that there is a statistically significant and positive (coefficient=0.076, $P<0.001$) relationship between the ratio of audit fees to total audit fees and FV. Then, EAIND is positively related to the feedback value of earnings. The finding of this study is consistent with agency theory which states that the EAIND assure the shareholders on the quality of the financial statements (Rezaee, 2004).

According to the literature, the auditor may become more reliant on the client when considering future revenues from non-audit services (NASs) to that client (Becker et al., 1998). Thus, auditors may be willing to ignore clients' violations and breaches to protect their prospective revenues. The SOX Act of 2002 believes that the resulting economic bond between auditor and client would impair auditor independence and then compromise the audit quality (Tepalagul & Lin, 2015) and reduce the quality of financial reports (Kinney et al., 2004). A large number of previous research findings, such as those of Gore et al. (2001), Frankel et al. (2002), that auditors are perceived to be less independent when they provide additional services and gaining many non-audit fees. Then, the finding of this study is that there is a positive relationship between the predictive value of earnings and EAIND. This result contradicts the argument by Nam, Brochet, and Ronen (2012) which states that the benefits arising from providing NASs (lower independence of external audit) lead to more predictable future cash flows and lower information risk.

In Model N.4.1, by using abnormal accrual as a proxy for earnings quality, this study finds that the proportion of audit fees to total audit fees is negatively related to the abnormal accrual (coefficient =-0.040 and $p<0.001$). It means the higher the proportion of audit fees to total audit fees (the more independent external audit) leads to the lower

abnormal accrual and higher neutrality of earnings. This study reveals that EAIND is positively associated with high earnings quality.

These findings support the view that non-audit fees hinder auditor independence due to the economic link between audit firms and their clients. Because the dependent audit firms on their clients do not provide reports against the clients, then the audit quality is decreased, and FRQ is reduced (Kinney et al., 2004).

The results of this study do not agree with the argument that the joint provision of audit and non-audit services (more investment in non-audit services) may result in knowledge spillovers increasing audit quality in detecting earnings management and reducing engagement risk (Simunic, 1984; Beck & Wu, 2006; Dechow & Schrand, 2010; Tepalagul & Lin, 2015).

The result of this study is also similar to Franklen et al. (2003), Ferguson et al. (2004), and Habbash (2010). They document a positive association between NAFEES (lower independence of external audit) and the magnitude of abnormal accruals. Moreover, it supports Gore et al. (2001) who report a positive association between the ratio of non-audit fees to total audit fees and earnings management for non-Big 5 clients. Besides, this result is consistent with the evidence of Antle et al. (2006) find that higher non-audit fees (lower independence of external audit), as measured by the ratio of non-audit to audit fees, increase abnormal accruals while higher audit fees decrease abnormal accruals. It also supports Kinney and Libby (2002) and Dee et al. (2006) who find that higher proportions of non-audit fees as a proxy for external audit independence (lower external audit independence) are associated with higher abnormal accruals as a proxy for earnings management, implying the lower quality of earnings.

However, the negative and significant association was found between abnormal accrual and EAIND by this study contradicts the study was conducted by Srinidhi and

Gul (2007). By using accruals as a surrogate for FRQ, they find that higher NAS fees (lower EAIND) are associated with lower accrual quality.

Moreover, the findings of this study are not consistent with Basiruddin (2011), who explains that according to the EAIND, there is no evidence to suggest a relationship between NAS fees and earnings management. It also does not support the study conducted by Al-Rassas and Kamardin (2015b) in Malaysia, which suggests that NAS fees are not associated with earnings quality (proxied by abnormal accrual).

(d) External Audit Quality and Earnings Quality (Hypothesis 4d)

Worldwide, recent financial scandals have increased the question of whether external auditing is effective in mitigating earnings management and external audit quality (EAQ) can contribute to the quality of financial reporting (Velury, 2003). In previous sections, this study examined the effect of external audit characteristics on earnings quality. Besides, this study uses external audit quality as another independent variable. It is measured by a composite score consisting of three main external audit characteristics (see Chapter 4, Section 4.6.4.1).

H4d: There is a relationship between external audit quality and earnings quality.

Depending on different proxies of earnings quality, Model P.4.2, Model F.4.2 and Model N.4.2 are used to test H4d (association between EAQ and earnings quality).

When the predictive value of earnings (current earnings-future cash flow relation) is used as a proxy for earnings quality by Model P.4.2, the coefficient for external audit quality is significant and positive as Table 5.10 (coefficient =0.051 and $p < 0.05$). It shows that the EAQ is positively related to the predictability of earnings.

A significant positive relationship is found between EAQ and feedback value of earnings (coefficient =0.016 and $p < 0.01$) when feedback value is used as a second proxy for earnings quality by Model F.4.2. It is in line with agency theory, which states that is

the role of the external auditor as a control tool that can be used to eliminate or at least provide a signal on opportunistic practices or fraud committed by management as earnings management and increase the quality of earnings (Jensen & Meckling, 1976; Watts & Zimmerman, 1986).

In model N.4.2, by using abnormal accrual as a proxy for earnings quality, the negative and significant relationship is found between EAQ and abnormal accrual (Table 5.10: coefficient = -0.029 and $p < 0.001$). The result indicates that the external audit with high quality is more effective in monitoring and controlling the aggressive behaviour of top executives; then, earnings will be neutral and faithfully represented. The findings of this study support the argument by Becker (1998) who states that high-quality auditors are more likely to detect questionable accounting practices and to qualify the audit report. Thus, high-quality auditing is an effective deterrent to earnings management because management's reputation is likely to be damaged and firm value reduced if misreporting is detected and revealed.

It also supports Cohen et al. (2004) and Fan and Wong (2005) who claim that external auditors play a monitoring and bonding role in order to mitigate the agency conflict between the controlling owners and the outside investors. They can also serve as an effective monitor on overly aggressive management through curtailing excessive earnings management techniques such as unexpected discretionary accruals.

It is consistent with prior studies such as Becker et al. (1998), Krishnan (2003), Van Caneghem (2004), Gul et al. (2003), Lin and Hwang, 2010). They suggested that higher-quality auditors have a greater ability to constrain earnings manipulation through the extent of their monitoring function, thus improving the quality of reported earnings.

5.6.2 Results and Discussion to Answer Research Question 2: Interaction among Different Corporate Governance Mechanisms and Earnings Quality

The previous models (first group models) aimed to explore the relationship between dependent variables, namely the predictive value (PV), feedback value (FV), and abnormal accrual (ABNAC), and independent variables, namely the characteristics of the board of directors, audit committee, internal audit, and external audit. This section presents the findings and provides a discussion concerning the second group of models which examines the relationship between above-mentioned dependent variables and interaction effect among CG mechanisms (as independent variables).

5.6.2.1 Earnings Quality and Interaction between Board Quality and Audit Committee Quality

H5: The interaction between board quality and audit committee quality has an influence on earnings quality.

This hypothesis investigated whether the board quality (BODQ) moderated the relationship between audit committee quality (ACQ) and earnings quality. Board quality and audit committee quality were measured using the composite score of the board and audit committee characteristics, respectively (see Chapter 4, Sections 4.6.1.1 and 4.6.2.1). The earnings quality was measured using predictive value, feedback value and neutrality of earnings. This study tests this hypothesis by using Model P.5, Model F.5, and Model N.5.

Table 5.11: Results of the Influence of the Interaction between Board Quality and Audit Committee Quality on Earnings Quality

GLS Regression						
Research Question 2	Hypothesis 5	Usefulness of Earnings	Earnings quality based on primary qualitative characteristics of accounting information			
		Attribute	Relevance		Faithful Representation	
		Components	Predictive Value	Feedback Value	Neutrality	
		Proxies	$(OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t})$		(FV)	(ABNAC)
		Models	P5		F5	N5
		Independent Variables	Coef ^{sig} (Z)		Coef ^{sig} (Z)	Coef ^{sig} (Z)
		EARN t	1.437*	(1.14)		
		EARN*BODQ	-.127	(-0.32)		
		EARN*ACQ	-.270	(-0.86)		
		EARN*BODQ*ACQ	.018	(0.18)		
		EARN*FIRMSIZE	.224***	(13.19)		
		EARN*GWTH	-.087	(-0.87)		
		EARN*YE-2008	.147*	(2.03)		
		EARN*YE-2009	.500***	(6.24)		
		EARN*YE-2010	.221**	(3.14)		
		EARN*YE-2011	-.032	(-0.51)		
		EARN*YE-2012	.188**	(2.84)		
		EARN*YE-2013	.196**	(3.1)		
		BODQ			-.007 (-0.98)	.300*** (5.63)
		ACQ			-.003 (-0.75)	.201*** (5.2)
		BODQ*ACQ			.002 (1.13)	-.064*** (-4.79)
		FIRMSIZE			-.000 (-1.19)	-.069*** (-5.28)
		GWTH			.000 (0.32)	-.009 (-0.71)
		YE-2008			-.011*** (-7.40)	-.000 (-0.01)
		YE-2009			-.011*** (-7.49)	.000 (0.01)
		YE-2010			-.010*** (-6.99)	.004 (0.55)
		YE-2011			-.012*** (-7.83)	.006 (0.85)
		YE-2012			-.010*** (-6.75)	.005 (0.77)
YE-2013			-.011*** (-6.8)	.006 (0.85)		
INTERCEPT	18555.7***	(21.32)	.030 (1.65)	.382* (2.49)		
R ²	0.687		0.051	0.156		
WALD CHI2	3025.82		62.20	80.52		

legend: * p<0.05; ** p<0.01; *** p<0.001
 Number of Groups: 483
 Number of Observations: 3388

By using predictive value and feedback value as dimensions of earnings quality (Model P.5 and Model F.5), Table 5.11 presented that BODQ is not significantly associated with the predictive value (Coefficient=-0.12) and feedback value of earnings (Coefficient=-0.007). Moreover, ACQ is not significant in these two regression models

(Coefficient= -0.27 and -0.003). Regression results concerning the interaction between BODQ and ACQ indicated that there is a non-significant but positive impact on the predictive value and feedback value of earnings in Malaysian listed companies. The finding of this study does not support Beasley and Salterio (2001) who believe that strong boards (as evidenced by the proportion of outside members, an independent chair who is not the CEO of the company, and larger size) will be more likely to appoint a higher ACQ.

From the regression Model N.5, this study finds that BODQ is positive and significantly associated with abnormal accruals (Table 5.11: coefficient=0.300, $P < 0.001$). The results of this model imply that firms with higher BODQ are ineffective, or probably allow for more earnings management. ACQ being a proxy for another internal aspect of CG is also positively significant (Coefficient=0.201, $P < 0.001$) in this regression, suggesting that ACQ may be ineffective in restricting earnings management. Surprisingly, this study finds that the interaction term between BODQ and ACQ is negative and significantly associated with abnormal accruals (Coefficient=-0.064, $P < 0.001$) in Model N.5. The result is in line with a theory of complementary or joint effect, in that high BODQ in conjunction with high ACQ may seem to be more effective or are allowing for lower abnormal accrual and more neutrality of earnings.

The results support Cohen et al., (2004) who state that the strong audit committee must be assigned by the strong board with real power to serve as an effective monitor over actions of management.

5.6.2.2 Earnings Quality and Interaction between Board Quality and External Audit Quality

H6: The interaction between board quality and external audit quality has an influence on earnings quality

This section presented the regression results for the moderating effect of board quality (BODQ) on the relationship between external audit quality (EAQ) and earnings quality. Similarly, board quality and external audit quality were measured using the composite score of the board and external audit characteristics, respectively (see Chapter 4, sections 4.6.1.1 and 4.6.4.1). The earnings quality was measured using predictive value, feedback value and neutrality of earnings. This study tests this hypothesis by using Model P.6, Model F.6, and Model N.6.

Using predictive value as a proxy to measure the earnings quality in Malaysian listed companies, Model P.6 in Table 5.12 showed that the coefficient for BODQ, EAQ, and BODQ*EAQ are not significant. However, concerning the feedback value of earnings, BODQ is negatively and significantly (coefficient=-0.035, $P < 0.05$) correlated with feedback value and EAQ is not significantly correlated with feedback value (Model F.6 in Table 5.12). However, the coefficient for the interaction between BODQ and EAQ and feedback value (Coefficient=0.012, $p < 0.05$) shows a possible joint effect on feedback value. It means that the BODQ*EAQ has a positive and significant effect on the feedback value of earnings.

It is similar to the argument by Lipton and Lorsch (1992) and Jensen (1993). They explain that if boards are less effective in monitoring the financial reporting process due to a larger board (Beasley, 1996), the external auditor of the firm evaluates the control environment as weak. Thus, more audit hours leading to higher audit fees are required to cover the weaknesses of the board. In summary, the result from the multivariate regression is consistent with the proposition of agency theory, which suggests that independent non-executive directors on boards are associated with effective monitoring. They complement their monitoring function by demanding a higher quality audit from an external auditor in terms of a more extensive audit effort and a higher number of audit hours, resulting in higher audit fees and higher perceived audit quality (Basiruddin, 2011).

Table 5.12: Results of the Influence of the Interaction between Board Quality and External Audit Quality on Earnings Quality

GLS Regression				
Research Question 2 Hypothesis 6	Usefulness of Earnings	Earnings quality based on primary qualitative characteristics of accounting information		
	Attribute	Relevance		Faithful Representation
	Components	Predictive Value	Feedback Value	Neutrality
	Proxies	$(OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t})$	(FV)	(ABNAC)
	Models	P5	F5	N5
	Independent Variables	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)
	EARN t	2.537*** (9.04)		
	EARN*BODQ	-.045 (-0.79)		
	EARN*EAQ	-.040 (-0.54)		
	EARN*BODQ*EAQ	.000 (0.00)		
	EARN*FIRMSIZE	.231*** (13.51)		
	EARN*GWTH	-.039 (-0.41)		
	EARN*YE-2008	.140* (1.99)		
	EARN*YE-2009	.490*** (6.32)		
	EARN*YE-2010	.195** (2.87)		
	EARN*YE-2011	.002 (0.04)		
	EARN*YE-2012	.178** (2.76)		
	EARN*YE-2013	.199** (2.87)		
	BODQ		-.035* (2.39)	.045*** (5.47)
	EAQ		.001 (0.99)	-.029** (-3.12)
	BODQ*EAQ		.012* (1.90)	-.019* (-1.53)
	SIZE		.076 (0.00)	-.061*** (-3.76)
	GWTH		.001 (0.46)	-.020 (-1.33)
	YE-2008		-.010*** (-7.10)	.000 (0.11)
	YE-2009		-.010*** (-7.07)	-.002 (-0.32)
	YE-2010		-.008*** (-5.87)	.006 (0.76)
	YE-2011		-.011*** (-7.64)	.002 (0.25)
	YE-2012		-.009*** (-6.11)	.007 (0.91)
YE-2013		-.009*** (-6.44)	.007 (1.00)	
INTERCEPT	18361.5*** (21.21)	.007 (1.30)	1.123*** (4.94)	
R ²	0.685	0.013	0.192	
WALD CHI2	2972.58	63.77	61.06	

legend: * p<0.05; ** p<0.01; *** p<0.001
Number of Groups: 483
Number of Observations: 3388

Similarly, ABNAC is used as a proxy to measure the earnings quality while the interaction effect between board quality and external audit quality on earnings quality is investigated. According to the Model N.6 in Table 5.12, BODQ is positively and significantly (coefficient=0.045, P<0.001) correlated with ABNAC, and also EAQ is

negatively and significantly (coefficient= -0.029, $P < 0.01$) correlated to ABNAC. However, the negative and significant association between BODQ*EAQ and ABNAC (coefficient = -0.019, $p < 0.05$) indicates a possible joint effect or relationship between BODQ and EAQ in Malaysian listed companies. Thus, external audit supposed to moderate the association between board quality and earnings quality in terms of neutrality.

It supports the argument by Dechow et al. (1996), which indicated that if the board quality seems to be weak in monitoring management and the financial accounting process, the auditors may help to moderate the influence of board quality on earnings quality by devoting more audit efforts and charging the firm higher fees.

5.6.2.3 Earnings Quality and Interaction between Audit Committee Quality and Internal Audit Quality

H7: The interaction between audit committee quality and internal audit quality has an influence on earnings quality

The role of the audit committee and internal audit as the firm's internal control mechanisms are significant to ensure the FRQ (Carcello et al., 2002). By using PV, FV, and neutrality of earnings as dimensions of earnings quality, this study examined the moderating effect of audit committee quality (ACQ) on the relationship between internal audit quality (IAQ) and earnings quality. By the same way, audit committee quality and internal audit quality was measured using the composite score of the audit committee and internal audit characteristics, respectively (see Chapter 4, sections 4.6.2.1 and 4.6.3.1). Model P.7, model F.7 and model N.7 in Table 5.13 presented the regression result for this hypothesis.

Table 5.13 shows that when the predictive value is used as a proxy for earnings quality (Model P.7), the coefficient is insignificant for ACQ (coefficient = -0.08) and internal

audit (coefficient = 0.61). It suggests that listed firms with higher ACQ and IAQ are not associated with the predictive value of earnings. Moreover, the interaction effect between ACQ and IAQ is not significant when the earnings quality is measured by predictive value in Malaysian listed companies (coefficient = -0.15).

Similarly, this study utilises feedback value as a second proxy to measure earnings quality to test this hypothesis. Model F.7 in Table 5.13 indicate that not only ACQ (coefficient = 0.0068, $p < 0.01$) and IAQ (coefficient = 0.017, $p < 0.05$) have positive and significant effect on feedback value but also the interaction between ACQ and IAQ (coefficient = 0.047, $p < 0.05$) has a significant and positive impact on feedback value in Malaysian listed companies. The result is in line with a theory of complementary or joint effect, in that high ACQ in conjunction with high IAQ may seem to be more effective on earnings quality. Thus, this hypothesis is supported in the case of feedback value as a proxy for earnings quality.

It is consistent with Raghunandan and McHugh (1994) and Beasley et al. (2000) who suggest that an effective audit committee strengthen the status of the IAF, and the IAF, in turn, assists the audit committee in ensuring the quality of earnings provided by management.

By using neutrality as a proxy to evaluate the earnings quality, this hypothesis predicted that ACQ would moderate the relationship between IAQ and earnings quality. The results of Model N.7 (see Table 5.13) showed a positive and non-significant (coefficient=0.016) effect of ACQ and a positive and significant (coefficient=0.14, $p < 0.05$) effect of IAQ on ABNAC. However, surprisingly, the moderating effect of ACQ on the relationship between IAQ and abnormal accrual (as an inverse indicator of neutrality of earnings) is reported in Malaysian listed companies by this study (coefficient=-0.046, $p < 0.05$). These results support the theory of joint effect between ACQ and IAQ.

Table 5.13: Results of the Influence of the Interaction between Audit Committee Quality and Internal Audit Quality on Earnings Quality

		GLS Regression				
Research Question 2	Hypothesis 7	Usefulness of Earnings	Earnings quality based on primary qualitative characteristics of accounting information			
		Attribute	Relevance		Faithful Representation	
		Components	Predictive Value	Feedback Value	Neutrality	
		Proxies	$(OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t})$	(FV)	(ABNAC)	
		Models	P7	F7	N7	
		Independent Variables	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)	
		EARN t	2.275*** (3.74)			
		EARN*ACQ	-.085 (-0.59)			
		EARN*IAQ	.610 (1.00)			
		EARN*ACQ*IAQ	-.154 (-1.01)			
		EARN*FIRMSIZE	.220*** (12.68)			
		EARN*GWTH	-.070 (-0.71)			
		EARN*YE-2008	.162* (2.23)			
		EARN*YE-2009	.516*** (6.22)			
		EARN*YE-2010	.234** (2.96)			
		EARN*YE-2011	.007 (0.10)			
		EARN*YE-2012	.182* (2.27)			
		EARN*YE-2013	.213* (2.87)			
		ACQ		.006** (2.78)	.016 (0.69)	
		IAQ		.017* (2.24)	.147* (1.80)	
ACQ*IAQ		.047* (2.40)	-.046* (-2.27)			
FIRMSIZE		-.001 (-0.73)	-.063*** (-4.28)			
GWTH		.001 (0.53)	.005 (0.41)			
YE-2008		-.011*** (-7.64)	.004 (0.66)			
YE-2009		-.011*** (-7.51)	-.008 (-1.14)			
YE-2010		-.010*** (-6.29)	-.019* (-2.50)			
YE-2011		-.011*** (-6.85)	-.024** (-2.95)			
YE-2012		-.009*** (-5.61)	-.026** (-3.23)			
YE-2013		-.010*** (-6.76)	-.024** (-3.00)			
INTERCEPT	18419.1*** (21.44)	-.008 (-0.81)	1.149*** (1.06)			
R ²	0.690	0.04	0.158			
WALD CHI2	3058.66	65.66	107.69			

legend: * p<0.05; ** p<0.01; *** p<0.001
 Number of Groups: 483
 Number of Observations: 3388

The result supports the argument of agency theory which states that the asymmetry of information between audit committees and company management is decreased when there is the interaction between the audit committee and IAF (Scarborough et al., 1998; Bishop et al., 2000; Raghunandan et al., 2001; Sarens et al., 2009; Maria, 2012).

The findings of this study are consistent to some studies which suggest that the IAF can potentially interact with audit committees to monitor management and improve FRQ (Scarborough et al., 1998; Raghunandan et al., 2001; Goodwin & Yeo, 2001; Goodwin, 2003; Sarens et al., 2012). Moreover, this supports the argument was explained by Carcello et al. (2002) who states that the role of the audit committee and internal audit as the internal control mechanisms are essential to firms in ensuring the reliability of financial reporting.

5.6.2.4 Earnings Quality and Interaction between Audit Committee Quality and External Audit Quality

H8: The interaction between audit committee quality and external audit quality has an influence on earnings quality

Table 5.14 presented the regression results for the moderating effect of audit committee quality on the relationship between external audit quality and earnings quality. Audit committee quality (ACQ) and external audit quality (EAQ) were measured using the composite score of the audit committee and external audit characteristics, respectively (see Chapter 4, sections 4.6.2.1 and 4.6.4.1). The earnings quality was measured using PV, FV and neutrality of earnings. This study tests this hypothesis by using Model P.8, Model F.8, and Model N.8.

The research used the PV as a proxy to assess the earnings quality and tested the interaction effect between ACQ and EAQ on earnings quality. Model P.8 in Table 5.14 indicated that the interaction between ACQ and EAQ has a positive and significant impact

on PV as a proxy for earnings quality (coefficient=0.10, $p < 0.05$). In contrast, ACQ (coefficient=-0.36) and EAQ (coefficient=-0.48) solely do not have a significant impact on predictive value. These results are indicating that the EAQ and the ACQ have complementary roles (joint effects) within the CG.

In the case of feedback value (Model F.8), the result shows that there is no significant association between feedback value from one side and ACQ (coefficient=0.0039), EAQ (coefficient=0.0038), ACQ*EAQ (coefficient=-0.001) from other sides.

Similarly, ABNAC is used as an alternative proxy to measure earnings quality when this study tests the effect of the interaction between ACQ and EAQ on earnings quality. Model N.8 in Table 5.14 indicated that the interaction between ACQ and EAQ has a significantly negative (coefficient=-0.0542, $p < 0.01$) impact on ABNAC (positive effect on the neutrality of earnings) in Malaysian listed companies while ACQ (coefficient=0.15, $p < 0.001$) and EAQ (coefficient=0.18, $p < 0.01$) have a significant but positive influence on ABNAC. It means ACQ can positively and significantly moderate the association between EAQ and earnings quality. In other words, the results show that the EAQ and the ACQ have joint effects on the neutrality of earnings.

The results of this study do not support previous studies which have treated audit committees and external auditors as independent monitoring mechanisms as they relate to earnings management (Dechow et al., 1996; Becker et al., 1998; Francis & Schipper, 1999; Abdul Rahman & Ali, 2006; Baxter & Cotter, 2009; Chi et al., 2011; Chiang et al., 2011; Sun et al., 2014).

It interestingly supports Alves (2013) who studied how audit committee and external audit interacted to influence on the earnings quality. The results of his study appear to suggest that audit committee existence, and external audit independently does not provide effective monitoring of earnings management in Portuguese listed firms. However, audit committee existence and external audit jointly reduce earnings management. In particular,

the finding of this study suggests that ACQ and EAQ jointly are a positive step toward improving earnings quality.

Table 5.14: Results of the Influence of the Interaction between Audit Committee Quality and External Audit Quality on Earnings Quality

		GLS Regression			
Usefulness of Earnings	Earnings quality based on primary qualitative characteristics of accounting information				
	Attribute	Relevance		Faithful Representation	
Components	Predictive Value	Feedback Value		Neutrality	
Proxies	$(OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t})$	(FV)		(ABNAC)	
Models	P8	F8		N8	
Independent Variables	Coef ^{sig} (Z)	Coef ^{sig} (Z)		Coef ^{sig} (Z)	
EARN t	1.144* (1.08)				
EARN*ACQ	-.365 (-1.40)				
EARN*EAQ	-.481 (-1.03)				
EARN*ACQ*EAQ	.109* (0.93)				
EARN*FIRMSIZE	.226*** (12.93)				
EARN*GWTH	-.008 (-0.09)				
EARN*YE-2008	.160* (2.26)				
EARN*YE-2009	.521*** (6.63)				
EARN*YE-2010	.236*** (3.40)				
EARN*YE-2011	.032 (0.51)				
EARN*YE-2012	.1991** (3.04)				
EARN*YE-2013	.226** (3.20)				
ACQ		.003 (0.81)	.150*** (4.05)		
EAQ		.003 (0.41)	.184** (2.78)		
ACQ*EAQ		-.001 (-0.58)	-.054** (-3.25)		
FIRMSIZE		-.000 (-0.11)	-.058*** (-3.59)		
GWTH		.000 (0.33)	-.007 (-0.52)		
YE-2008		-.011*** (-7.37)	.002 (0.28)		
YE-2009		-.011*** (-7.26)	.007 (0.98)		
YE-2010		-.009*** (-6.46)	.005 (0.71)		
YE-2011		-.0118*** (-7.79)	.010 (1.29)		
YE-2012		-.009*** (-6.36)	.014 (1.75)		
YE-2013		-.010*** (-7.59)	.013 (1.65)		
INTERCEPT	18380.7***(21.38)	.001 (0.08)	.620*** (4.17)		
R ²	0.688	0.08	0.172		
WALD CHI2	3054.36	85.92	96.25		

legend: * p<0.05; ** p<0.01; *** p<0.001
 Number of Groups: 483
 Number of Observations: 3388

5.6.2.5 Earnings Quality and Interaction between Internal Audit Quality and External Audit Quality

H9: The interaction between internal audit quality and external audit quality has an influence on earnings quality

The interaction between the external and internal audit is crucial to effective governance and to achieving high FRQ (Sarbanes-Oxley Act, 2002). This hypothesis investigated whether the internal audit quality moderated the relationship between external audit quality and earnings quality. Internal audit quality (IAQ) and external audit quality (EAQ) were measured using the composite score of the internal audit and external audit characteristics, respectively (see Chapter 4, sections 4.6.3.1 and 4.6.4.1). The earnings quality was measured using predictive value, feedback value and neutrality of earnings. This study tests this hypothesis by using Model P.9, Model F.9, and Model N.9.

When this study uses the predictive value as a proxy to measure the earnings quality by Model P.9, the results by Table 5.15 show that IAQ (coefficient=-0.060, $P < 0.01$) and EAQ (coefficient=-0.042, $P < 0.001$) are negatively and significantly associated with predictive value. At the same time, the interaction between IAQ and EAQ has a significant and positive (coefficient=0.013, $p < 0.01$) impact on earnings quality in Malaysian listed companies. These results indicate that the IAQ and the EAQ have complementary roles (joint effects) within the CG.

However, concerning the feedback value as another proxy for earnings quality, this study reported no significant association between IAQ (coefficient=0.0057), EAQ (coefficient=-0.0043), and IAQ*EAQ (coefficient=-0.0024) as independent variables and feedback value as the dependent variable.

By using ABNAC as another proxy for earnings quality (Model N.9), as provided in Table 5.15, the coefficients for EAQ is non-significant and negative (coefficient=-0.0011) providing no evidence for the existence of associations between the EAQ and ABNAC.

Moreover, the results show that IAQ is significantly but positively (coefficient=0.060, $p<0.001$) related to the ABNAC, suggesting that there is a negative impact on the neutrality of earnings. However, a contrasting trend is depicted for the coefficient of IAQ*EAQ (coefficient=-0.022, $p<0.001$). The evidence suggests that the interaction between IAQ and EAQ has a negative and significant influence on ABNAC. It means that that IAQ positively moderated the effectiveness of EAQ to improve neutrality of earnings in Malaysia. It supports the theory of joint effect between IAQ and EAQ in the relationship with the neutrality of earnings.

This result fundamentally contradicts the study by Felix and Gramling (2001), Prawitt et al. (2012) and who propose that internal audit can be regarded, at least in part, as a substitute for external audit. They believe that when an internal audit is involved in strengthening internal control, an external audit can rely on internal audit's task and a lower assessment of audit risk is caused, and then audit fee is reduced. Mat Zain et al. (2015) found similar results in Malaysia, which assumes that firms pay lower audit fees when external auditors rely on internal audit work.

The current study's finding is consistent with Carey et al. (2000), Goodwin-Stewart and Kent (2006), and Hay et al. (2008). These works supported complementary perspective or joint effect and suggested that the internal and external audit can be considered as the complementary means by the entities for improving the monitoring. This perspective is consistent with a broader role of internal audit, which in recent years has evolved from a narrow focus on control to embrace risk management and corporate governance.

Table 5.15: Results of the Influence of the Interaction between External Audit Quality and Internal Audit Quality on Earnings Quality

		GLS Regression			
Usefulness of Earnings	Earnings quality based on primary qualitative characteristics of accounting information				
	Attribute	Relevance		Faithful Representation	
Components	Predictive Value	Feedback Value	Neutrality		
Proxies	$(OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t})$	(FV)	(ABNAC)		
Models	P9	F9	N9		
Independent Variables	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)		
EARN t	2.591** (10.47)				
EARN*EAQ	-.042*** (-0.99)				
EARN*IAQ	-.060** (0.72)				
EARN*IAQ*EACQ	.013** (1.40)				
EARN*FIRMSIZE	.225*** (12.70)				
EARN*GWTH	.084 (0.98)				
EARN*YE-2008	.127 (1.80)				
EARN*YE-2009	.504*** (6.22)				
EARN*YE-2010	.204** (2.64)				
EARN*YE-2011	.025 (0.33)				
EARN*YE-2012	.149* (1.91)				
EARN*YE-2013	.185* (2.01)				
EAQ		-.004 (-0.42)	-.001 (-0.25)		
IAQ		.005 (3.03)	.060*** (6.66)		
IAQ*EAQ		-.002 (3.11)	-.022*** (-5.27)		
FIRMSIZE		-.000* (-0.01)	-.053*** (-3.44)		
GWTH		.002 (0.93)	-.009 (-0.66)		
YE-2008		-.009*** (-6.49)	.006 (0.79)		
YE-2009		-.008*** (-6.13)	-.000 (-0.03)		
YE-2010		-.006*** (-4.51)	-.004 (-0.49)		
YE-2011		-.009*** (-5.74)	-.004 (-0.54)		
YE-2012		-.007*** (-4.44)	-.007 (-0.83)		
YE-2013		-.007*** (-4.48)	-.006 (-0.73)		
INTERCEPT	17700.7*** (20.66)	.020*** (4.31)	1.082*** (4.62)		
R ²	0.687	0.014	0.18		
WALD CHI2	2839.02	69.23	83.02		

legend: * p<0.05; ** p<0.01; *** p<0.001
Number of Groups: 483
Number of Observations: 3388

5.6.2.6 Earnings Quality and Interaction between Board Quality and Internal Audit Quality

H10: The interaction between board quality and internal audit quality has an influence on earnings quality

This study tests the hypotheses examining whether board quality is a moderator of the relationship between internal audit quality and earnings quality. This study also uses predictive value, feedback value and neutrality of earnings as three different methods to evaluate earnings quality. Similarly, board quality (BODQ) and internal audit quality (IAQ) were measured using the composite score of the board and internal audit characteristics, respectively (see Chapter 4, sections 4.6.1.1 and 4.6.3.1). This study tests this hypothesis by using Model P.10, Model F.10 and Model N.10.

Using predictive value as a proxy to measure the earnings quality in Malaysian listed companies, Model P.10 in Table 5.16 showed that board quality positively and significantly (coefficient=0.008, $p < 0.05$) is related to the predictive value as a proxy for earnings quality in Malaysia. However, internal audit quality is positively (coefficient=0.146) and non-significantly related to the predictive value. Regarding the interactive variable (BODQ*IAQ), there is negative and significant (coefficient=-0.054, $P < 0.01$) relationship between this and predictive value. A plausible explanation is that board quality negatively and significantly moderated the effectiveness of internal audit to improve earnings quality in Malaysia, and there is a substitution relationship between BODQ and IAQ.

Similarly, the researchers used the feedback value as a proxy to measure the earnings quality and tested the interaction effect between BODQ and IAQ on earnings quality. Model F.10 in Table 5.16 indicated that the interaction between board quality and internal audit has a non-significant negative impact on earnings quality in Malaysian listed companies. Moreover, IAQ and BODQ do not have a significant influence on feedback value.

Table 5.16 also presents the findings of whether BODQ, IAQ, and BODQ*IAQ have an impact on the abnormal accruals as an alternative method to measure neutrality of earnings. As shown in Table 5.16 (Model N.10), the interaction term between IAQ and

BODQ is positive and significantly associated with abnormal accruals (coefficient=0.032, $P<0.001$). The result is contrary to the expectations of this study for a joint or complementary effect, in that high IAQ in relation with high BODQ may appear to be ineffective on earnings quality or providing more earnings management. However, the coefficient signs of IAQ (coefficient= -0.049, $P<0.001$) and BODQ (coefficient= -0.019, $P<0.001$), as expected, are all negative and significant. It means that the benefit from high board quality and high internal audit quality is reduced by increasing the benefit attributed to the interaction variable suggesting a possible substitution effect between BODQ and IAQ.

This result supports the study was conducted by Johl et al. (2013) in Malaysia who states that although the lower ordered variables board quality and internal audit quality coefficients are negatively related to abnormal accruals, the interaction variable between these two variables is positively related to abnormal accruals, indicating the plausibility of a substitution relationship between board quality and internal audit quality to maintain the level of financial reporting quality.

The moderator interacts with the independent variable of interest so that the independent variable's association with the dependent variable is stronger or weaker at different levels of the moderator variable. In other words, the association of the independent variable with the dependent variable depends on the value (or level) of the moderator variable. If the interaction term explains a statistically significant amount of variance in the dependent variable, a moderator effect is present.

Table 5.16: Results of the Influence of the Interaction between Board Quality and Internal Audit Quality on Earnings Quality

		GLS Regression			
Usefulness of Earnings	Earnings quality based on primary qualitative characteristics of accounting information				
	Attribute	Relevance		Faithful Representation	
Components	Predictive Value	Feedback Value	Neutrality		
Proxies	$(OCF_{i,t+1} = \pi_0 + \pi_1 EARN_{i,t})$	(FV)	(ABNAC)		
Models	P10	F10	N10		
Independent Variables	Coef ^{sig} (Z)	Coef ^{sig} (Z)	Coef ^{sig} (Z)		
EARN t	2.572*** (9.77)				
EARN*BODQ	.008* (0.21)				
EARN*IAQ	.146 (1.49)				
EARN*BODQ*IACQ	-.054** (-1.54)				
EARN*FIRMSIZE	.220*** (12.99)				
EARN*GWTH	-.086 (-0.87)				
EARN*YE-2008	.145* (2.06)				
EARN*YE-2009	.511*** (6.27)				
EARN*YE-2010	.215** (2.77)				
EARN*YE-2011	.014 (0.19)				
EARN*YE-2012	.186* (2.35)				
EARN*YE-2013	.199* (2.45)				
BODQ		-.002 (-2.14)	-.019*** (-3.82)		
IAQ		.001 (1.03)	-.049*** (-4.02)		
BODQ*IAQ		-.001 (-1.61)	.032*** (6.94)		
FIRMSIZE		-.000 (-0.80)	-.066*** (-4.87)		
GWTH		.000 (0.27)	-.010 (-0.75)		
YE-2008		-.010*** (-6.75)	.002 (0.27)		
YE-2009		-.009*** (-6.49)	-.011 (-1.35)		
YE-2010		-.008*** (-5.36)	-.017 (-1.93)		
YE-2011		-.010*** (-6.08)	-.022* (-2.36)		
YE-2012		-.008*** (-5.12)	-.018 (-1.96)		
YE-2013		-.009*** (-5.98)	-.021 (-2.26)		
INTERCEPT	18136.3*** (20.99)	.011* (2.47)	1.196*** (55.81)		
R ²	0.685	0.07	0.179		
WALD CHI2	2887.93	63.32	80.40		

legend: * p<0.05; ** p<0.01; *** p<0.001
 Number of Groups: 483
 Number of Observations: 3388

5.6.3 Current Earnings in Predictive Value Models: Results and Discussion

As shown in Table 5.7 to 5.16, the estimated coefficient on the current earnings (EARN t) is positive and significant, implying that Malaysian shareholders do make use of reported earnings to predict future cash flows.

5.6.4 Control Variables: Results and Discussion

This section discusses the results for the control variables in all models; they are dealt with together since they are the same control variables, and they show broadly similar results. Tables 5.7 to 5.16 present the results of the control variables. All control variables are subjected to several multivariate tests in all models in order to determine whether additional characteristics of a company have any effect on earnings quality. For example, this study combines the firm size, firm growth and annual effect (year effect) with current earnings to assess whether the coefficient of current earnings is higher or lower due to a control variable effect in predictive value models. Moreover, these control variables are combined with feedback value and neutrality models for the same assessment. The results are generally consistent with findings in the prior literature.

5.6.4.1 Firm Size

Firm size (SIZE) is a variable that could potentially bias the coefficients of the variables of interest in some studies (Jiang, 2008). Hence, this study includes a size variable to control for potential earnings manipulation or measure earnings quality. SIZE is significantly and positively related to the earnings predictability (coefficient > 0.20) at the 0.001 level in all PV models. In comparison, SIZE does not show any statistically significant differences in any FV models. It means that the earnings of large firms have more ability to predict future cash flows. Prior studies suggest that large firms have higher pressure on their management to report more predictable earnings (Pincus & Rajgopal, 2002).

From the abnormal accruals' perspective, SIZE is found to have a significant negative (coefficient < 0.1) relationship with ABNAC in all neutrality models at the level of 0.001. It means that the earnings of large firms are less inflated by management discretion. This result supports the argument that large firms practice less earnings management because

they have more effective and sophisticated internal corporate system (Warfield et al., 1995; Beasley et al., 2000), more able to hire big-N auditors (Becker et al., 1998; Francis and Schipper, 1999) and are more cautious about the reputation cost.

Consistent with the findings of prior studies such as Becker et al. (1998), Xie et al. (2003), and Abdul Rahman and Ali, (2006), the findings of this study reinforce the argument that smaller firms have higher motivation for earnings management since they are subjected to less monitoring by investors, financial analysts and regulators. It contradicts Pincus and Rajgopal (2002) who suggested that large firm size may be an incentive for managers to engage in earnings management.

5.6.4.2 Firm Growth

This study considers firm growth as a control variable because it is identified in prior literature as being associated with the extent of earnings management and earnings quality. However, firm growth shows no significant relationship with predictive value, feedback value and abnormal accruals. Concerning firm growth, the finding of this research does not support some previous studies (Beasley, 1996; Abbott et al., 2000; Carcello & Nagy, 2004; Abbott et al., 2004; Abdul Rahman and Ali, 2006; Dimitropoulos & Asteriou 2010), who document that a rapidly growing firm is more likely to encourage managers to manipulate earnings to obtain better financing terms.

5.6.4.3 Annual Effects

Because of the gradual improvements of the Malaysian economic environment during the period 2007 to 2013, it was expected that there would be a positive annual effect on earnings quality. All regressions in this study were estimated by including year dummies to control for annual effects. 'The Year' variable controls for the overall time trend or for

time-specific factors in all specifications. Every dummy variable value is equal to one for every year and zero otherwise.

Accordingly, the results shown in Tables 5.7 to 5.16 indicate a positive and significant effect on the predictive value of earnings in all years except the year 2011. The non-significant effect of the year 2011 on the predictive value of earnings can be due to this fact that the influence of MCCG 2007 has been weakened for five years. That is why it was required to be revised in 2012. The results for all feedback value models show a positive and significant effect for all years. However, the results shown in Tables 5.7 to 5.16 indicate a non-significant effect for abnormal of accruals in all years.

5.7 Robustness Check

5.7.1 Parametric Test (OLS) Results

This study adopts a non-parametric test based on the nature of the data. Previously, the assumptions of the OLS regression were discussed, and GLS regression was deemed to be more suitable for this study. However, interestingly, some research questions the importance of satisfying some assumptions of OLS tests (see Chapter 4, Section 4.11) before employing parametric tests. Concerning the assumptions of normality and homoscedasticity, Habbash (2010) states that several studies assess the impact of the samples with non-normal distributions and unequal variances on the values of parametric tests. The findings presented by him suggest that violation of these two assumptions generally has slight effects on the values of these tests.

Some researchers argue that mild non-normality may not affect ordinary least regression outcomes, for data with big size (Box, 1954; Muthen & Kaplan, 1992; Ory & Mokhtarian, 2010). On the other hand, many studies claim that parametric tests can be applied with ordinal variables because tests apply to numbers and not to what those numbers relate to (Wilcox, 1987).

It is common to use the non-parametric tests in earnings quality's studies when some parametric test assumptions are not met. However, some prior studies choose the solution of doing nothing about this problem. In other words, they carry on using parametric test while recognising its limitations (see, e.g., Peasnell et al., 2005; Davidson et al., 2005; Abdul Rahman & Ali, 2006; Benkel et al., 2006; Jaggi et al., 2009).

Then, the sensitivity analysis adopted in this study for the verifying of GLS regression results is the pooled OLS test that assumes that all observations have occurred at the same point of time.

Table 5.17 and tables 5.19 to 5.27 (in Appendix) show that the findings are considerably similar to panel data-cross sectional. In most models, there is no difference between the results of the analyses using the non-parametric test and the parametric test. The R square is similar. Besides, the results show the same level of significance, same coefficients, and same directions for all variables, except for some variables are explained as Table 5.18.

Moreover, the results of some interaction models (see Table 5.18) show that there are some differences between the indexes of the analyses (e.g. coefficients' value and coefficients' sign) using OLS and GLS. Also, when the study uses the OLS regression model as a sensitivity test, the significance level drops or raises from a level to another level. However, OLS and GLS tests show the same results for those interaction models in terms of joint effects.

Therefore, GLS multiple regression seems to be an appropriate approach in this research. Ordinary least squares (OLS) regression is also subjected to many conditions. As a consequence, they are both proper and robust techniques, particularly when the model includes dummy and continuous variables (Hutchinson & Sofroniou, 1999).

Table 5.17: Results of the Relationship between Board Characteristics and Earnings Quality (OLS Regression)

OLS Regression (H1)						
Variable/Model	P1.1	P1.2	F1.1	F1.2	N1.1	N1.2
	Coef ^{sig} (t)	Coef ^{sig} (t)	Coef ^{sig} (t)	Coef ^{sig} (t)	Coef ^{sig} (t)	Coef ^{sig} (t)
EARN t	5.868*** (17.31)	5.932*** (19.46)				
BODSIZE *EARN	-.076*** (5.95)					
BODIND * EARN	.068 (0.30)					
BODMEET * EARN	.017** (3.15)					
Non-CEO* EARN	.319*** (5.91)					
FIRMSIZE*EARN	.402*** (18.24)	.437*** (22.76)				
GWTH*EARN	-.456*** (-3.45)	-.314* (-2.39)				
2008*EARN	.359*** (5.46)	.274*** (4.23)				
2009*EARN	1.218*** (14.70)	1.215*** (14.62)				
2010*EARN	.193** (3.00)	.249*** (3.89)				
2011*EARN	.009 (0.16)	.066 (1.09)				
2012*EARN	.262*** (4.45)	.310*** (5.31)				
2013*EARN	.277*** (4.56)	.304*** (5.001)				
BODQ*EARN		.065** (2.62)				
BODSIZE			-.003 (-0.87)		-.020* (-2.48)	
BODIND			.093 (1.63)		-.034* (-0.29)	
BODMEET			.008* (2.38)		.005 (0.71)	
Non-CEO			.058*** (3.48)		-.104** (-2.98)	
FIRMSIZE			.001* (0.27)	.000 (0.20)	-.083 (-7.96)	-.081*** (-8.42)
GWTH			.028 (0.84)	.020 (0.59)	-.010 (-0.15)	-.001 (-0.02)
2008			-.031 (-1.44)	-.029 (-1.34)	.005 (0.13)	.003 (0.08)
2009			-.044 (-2.02)	-.042 (-1.93)	-0.00 (-0.04)	-0.000 (-0.02)
2010			-.041 (-1.87)	-.039 (-1.78)	.006 (0.14)	.004 (0.09)
2011			-.042 (-1.91)	-.039 (-1.81)	.009 (0.21)	.004 (0.11)
2012			-.039 (-1.80)	-.038 (-1.73)	.003 (0.07)	.004 (0.10)
2013			-.043 (-1.98)	-.033 (-1.53)	.008 (0.18)	.003 (0.08)
BODQ				.006* (0.83)		-.080*** (5.13)

Table 5.17, continued

OLS Regression (H1)						
Variable/Model	P1.1	P1.2	F1.1	F1.2	N1.1	N1.2
Constant	46053.8*** (8.15)	46765.7*** (8.21)	0.004 (0.07)	.022 (0.38)	1.262** (9.11)	1.296*** (10.45)
Number of Observation	3388	3388	3388	3388	3388	3388
r2	.696	.689	.009	.002	.026	.028
r2_a	.694	.688	.005	-.004	.022	.025
Legend: * p<0.05; ** p<0.01; *** p<0.001 Number of Groups: 483						

Table 5.18: Differences between OLS and GLS Regression Models

Variables	Models	GLS Regression Test	OLS Regression Test	Final Results
Panel A				
BODIND	P.1.1	0.5270***	0.0684190	
BODIND	F.1.1	.01335695**	0.0937972	
BODSIZE	F.1.1	-0.054316*	-0.00345299	
ACSIZE	N.2.1	0.0373069***	0.02427884	
Panel B				
BODQ	P.5	-0.12789222	-1.1965297***	Different Results
ACQ	P.5	-0.27053457	-1.2313801***	
BODQ* ACQ	P.5	0.01806801	.28675156***	
BODQ	F.6	-0.0353182*	0.02943609	Joint Effect In Both Analyses
EAQ	F.6	0.00153651	0.0105423	
BODQ* EAQ	F.6	0.0124909*	.01212869*	
BODQ	N.6	.04547493***	0.10552806	Joint Effect In Both Analyses
EAQ	N.6	-.0291224**	-0.01422594	
BODQ* EAQ	N.6	-0.0197819*	-0.01221921**	
ACQ	F.7	.00687012**	0.04202789	Joint Effect In Both Regression Analyses
IAQ	F.7	.01755199*	0.08944273	
ACQ*IAQ	F.7	.0478025*	0.02474478*	
ACQ	N.7	0.01604922	0.00133396	Joint Effect In Both Regression Analyses
IAQ	N.7	0.14715597*	-0.0962123	
ACQ*IAQ	N.7	-.04641871*	-.03717086*	
ACQ	N.8	.15043343***	0.0743428*	Joint Effect In Both Regression Analyses
EAQ	N.8	.18464237**	0.05736211	
ACQ*EAQ	N.8	-.05429625**	-0.02413198*	

5.8 Summary of the Chapter

This chapter reports the results of empirical findings on the association between four critical sets of variables, namely, board characteristics, audit committee characteristics,

internal audit characteristics and external audit characteristics, and the extent of earnings quality in the Malaysian listed firms over seven years from 2007 to 2013.

Some types of analysis, such as descriptive statistics and multivariate analyses, are applied to analyse the data of this study. The multivariate analyses are conducted using the panel data random effects models on a sample of 3388 firm-year observations. Several further analyses, such as specification tests are run and discussed, and another sensitivity test (OLS regression) is performed and compared to the main findings.

The hypothesis variables consist of board characteristics (board size, board independence, board meeting, non-CEO duality and board quality), audit committee characteristics (audit committee size, audit committee independence, audit committee meeting, audit committee expertise and audit committee quality), internal audit characteristics (internal audit experience, internal audit independence and, internal audit quality), external audit characteristics (external audit fee, external audit independence, external audit size and external audit quality) and interaction between corporate governance mechanisms. Since there are multiple variables surrogate for each corporate governance mechanism and most of them are highly correlated with each other, each set of corporate governance characteristics such as board characteristics are included in a single empirical model. Therefore, 10 main hypotheses are further categorised into 23 sub-hypotheses, which are examined by 42 models under three main series of models such as predictive value model, feedback value model and neutrality model. Indeed, future cash flows-current earnings relation and feedback value are used respectively as proxies to measure predictive value and feedback value as two components of the relevance of earnings. Moreover, abnormal accrual is used as a proxy to measure neutrality as a component of faithful representational of earnings. This study also controls for some variables such as firm size, firm growth and year effects. Based on the descriptive statistics of this study, the mean of each corporate governance characteristics

indicates that most of the Malaysian firms follow the MCGG 2012 or meet the Bursa Malaysia listing requirements.

Concerning the multivariate regression, the expectation of beneficial CG practices constraining opportunistic earnings management and increasing earnings quality was, to a large extent, found to be accurate in Malaysian companies. Accordingly, most findings are consistent with agency and resource dependence theory's prediction.

Regarding the board of directors, all board characteristics variables examined in this research have a significant effect on the predictive value and feedback value of earnings. However, BODSIZE is significantly and negatively associated with PV, FV of earnings. Apart from the frequency of board meeting, other board characteristics have a significant relationship with neutrality. However, the direction is positive for BODIND and Non-CEO. Overall, BODQ has a positive and significant association with these three proxies of earnings quality.

For audit committee characteristics, the only ACIND and ACMEET show the significant and positive influence on the predictive value of earnings. Except for ACMEET, none of the audit committee factors affects the FV of earnings. ACMEET and ACIND are significantly positively while ACSIZE is significantly and negatively related to the neutrality of earnings. However, ACEXP is not related to the neutrality of earnings. By using three proxies of earnings quality, this study finds that ACQ is positively related to the earnings quality.

IAEXP is also positively and significantly related to the PV of earnings. In contrast, there is no significant relationship between IAEXP and FV of earnings. However, IAEXP is significantly and positively related to the neutrality of earnings. IAIND is negatively and significantly related to the PV, FV and neutrality of earnings. The results indicate that IAQ does not have a significant influence on PV and FV of earnings. However, it is negatively and significantly associated with the neutrality of earnings.

All external audit characteristics are positively and significantly related to PV of earnings. However, there is no significant relationship between EASIZE from one side and FV of earnings and neutrality from other sides. This study finds that EAQ is significantly and positively related to the PV, FV and significantly and negatively related to the neutrality of earnings.

Concerning the interaction between corporate governance mechanisms, most of them have joint effects on three proxies of the earnings quality except the interaction between the board quality and internal audit quality, which follow substitution effects.

The firm size as a control variable is significant in the positive direction in predictive and neutrality models, and firm growth is found to be insignificantly related to predictive value, feedback value, and neutrality of earnings. Sensitivity analysis uses alternative methods of analysis such as OLS to measure for the effects of the same variables. These sensitivity analysis results are also broadly consistent with the main results. The consistency in the results strengthens the validity of the results and the recommendations drawn from them.

Overall, although not all corporate governance variables support the stated hypotheses; this study has achieved its objective by identifying the attributes that answer the research question. This study, therefore, finds that the agency theory and resource dependence theory offer the most extensive explanation of the association between both the corporate governance mechanisms and the interactive effects of corporate governance mechanisms and earnings quality. In general, these findings suggest that firms with effective corporate governance mechanisms are related to more earnings quality based on qualitative characteristics of accounting information.

The next chapter will provide a summary of this study, the implications of this research and avenues for further research. The summary of the hypothesis and findings are also presented in the next chapter.

CHAPTER 6: SUMMARY AND CONCLUSION

6.1 Introduction

This chapter provides a summary and conclusion of the thesis. This chapter reviews the empirical evidence focused on two research questions linked to 10 main hypotheses and 23 sub-hypotheses and addresses conclusions. The first investigation examined the association between corporate governance (CG) mechanisms and earnings quality. The second investigation examined how interaction effects among CG mechanisms can affect earnings quality. This chapter is organised as follows. Section 6.2 presents a summary of the research problem and research questions. Section 6.3 discusses a summary of the research methodology, and then in Section 6.4, a summary of the results from the quantitative analysis is provided. Section 6.5 addresses the implications of the results for investors, regulators and researchers. Moreover, the contributions of this study are presented in Section 6.6. Section 6.7 highlights the limitations of this research, and sections 6.8 and 6.9 suggest recommendations and some avenues for future research, respectively. Finally, the chapter is summarised in Section 6.10.

6.2 Restatement of the Research Problem and Research Questions

Outside investors are unable to obtain sufficient information about a company's performance and prospects (Cohen et al., 2004). Due to the agency problem, management can be motivated to manipulate earnings (Lobo and Zhou 2001). In this case, outside investors face risk while they finance firms. They have a concern about whether management misallocates their resources (Jensen & Meckling, 1976; La porta et al., 2000). Therefore, investors seek to find some tools utilised in monitoring management's behaviour and activities. As a result, accounting theories and the prior literature suggest that a monitoring system like CG may have effectiveness in the alignment of the interests of shareholders and managers, reduction of the opportunistic behaviour of managers, mitigation of the agency problem and, therefore, enhancement of the earnings quality.

When monitoring systems restrict executives' opportunistic behaviour, accounting earnings will have higher quality and more reliability (e.g. Dechow et al., 1996). It provides benefits to the shareholders in investment decision-making and capital markets in resource allocation efficiently (Mashayekhi & Abadi, 2011). Many regulatory and scholarly discussions have focused on the issues regarding the CG and earnings quality. Subsequently, this study has provided an extensive view of prior research that has argued the role of CG on earnings quality.

An important area for research is to find and investigate those governance factors included in the process of assuring financial statements (Cohen et al., 2004). Examining one factor in isolation of alternate governance mechanisms may not be appropriate to measure the CG structure of a firm. It may provide an incomplete analysis of the determinants of FRQ, especially earnings quality. Since Boards, audit committee, internal audit and external audit work together as partners to ensure highest FRQ (Bhagat & Jefferris, 2002; Rezaee, 2004; Gillan, 2006; Jiang et al., 2008). The whole is more than the sum of parts, and the impact of one part of the system cannot be appropriately appreciated except by taking into consideration its relationship with the other constituent parts of the system (Bhuiyan et al., 2006). Therefore, adopting their interaction is crucial to effective governance and high-quality financial reporting's achievement (Cohen et al., 2004).

All participants of CG involved in the supply chain of reporting should be committed to the essential reporting concepts of quality, relevance, reliability, accountability, transparency and integrity (Rezaee, 2004; Hassan Che Haat et al., 2008; Norwani et al., 2011). However, the lack of a generally accepted and a consistent definition of high FRQ among the key players in the CG mosaic has been identified by previous literature (McDaniel et al. 2002; Cohen et al., 2004). Moreover, previous research has approved that some characteristics of CG mechanisms such as the board of directors, audit

committee, internal audit, and external audit influence the FRQ (Dey, 2005; Rich, 2009; Norwani et al., 2011; Johl et al., 2013). Nonetheless, one of the critical problems found in prior literature is the operationalisation of this quality (Van Beest et al., 2009).

The review of the literature on operationalising financial reporting quality highlights that most of the previous studies mainly focus on specific types of measurement such as transparency and disclosure index, financial restatement, earnings management, fraud, and earnings quality. Moreover, there are some other proxies to measure earnings quality in the literature, for example, persistence, accrual quality, predictability, and smoothness (accounting-based attributes), value relevance, timeliness, and conservatism (market-based attributes). However, there is a gap concerning how to measure and operationalise earnings quality when studying the association between CG and earnings quality.

FASB/IASB (2010) stresses the importance of high-quality financial reports that influence capital providers. In addition, in the capital market, active investors require relevance and reliable information to reach profitable investing decisions (Armstrong et al., 2010). On the other hand, many studies have been conducted to prove CG mechanisms ensure the FRQ (Cohen et al., 2004; Rich, 2009; Norwani et al., 2011; Johl et al., 2013). Moreover, one of the main objectives of CG is to mitigate agency problem and increase investors' confidence in decision-making (Siagian et al., 2013). However, prior empirical studies have not directly addressed whether CG assures the relevance and faithful representation of accounting information, especially earnings.

Therefore, the objective of this study is to explore, empirically, the influence of CG characteristics and interaction effects among them on earnings quality based on primary qualitative characteristics in Malaysia. Therefore, the first research question of this study is whether specific characteristics of corporate governance mechanisms are associated with more qualified earnings. The second one is whether the interactions between corporate governance mechanisms influence the quality of earnings.

Moreover, this study reviews two theories that could prepare a scientific fundamental for improving earnings quality by CG mechanism and offer a conceptual framework showing the association between CG monitoring mechanisms and earnings quality. This thesis employs agency theory and resource dependence theory as the leading theories because they are supposed to be more relevant theories to the research questions.

Reviewing the literature on the association between CG and FRQ motivates this study for using the Malaysian companies as the sample. Moreover, an overview of the history of the Malaysia Code of Corporate Governance (MCCG) has been addressed to provide comprehension of the Malaysian corporate governance characteristics in order to assist the scholar in applying some attributes and measurements.

6.3 Summary of Research Methodology

Investors rely on the board of directors, audit committee and internal and external auditors to obtain relevant faithfully represented and neutral financial accounting information since they are unable to observe earnings quality directly. This study uses agency theory and resource dependence theory to explore the influence of the CG characteristics on financial reporting quality, especially earnings quality. A review of the relevant studies identifies four mechanisms of CG, namely, the board of directors, audit committee, internal audit, and external audit. Based on MCCG (2012), this study has identified specific characteristics of the board of directors (such as board size, board independence, frequency of board meeting, non-CEO duality), audit committee (such as audit committee size, audit committee independence, audit committee meeting frequency, audit committee financial expertise), internal auditors (such as internal audit experience, internal audit independence), and external auditors (such as audit firm size, independence, and external audit independence). These characteristics may improve the financial reporting quality, especially earnings quality.

Consistent with prior research, three proxies are utilised to measure earnings quality. The study computes the predictive value, feedback value of earnings as a method to measure the relevance of earnings as well as abnormal accruals (using Modified Jones Model) as a method to measure neutrality and then the faithful representation of earnings. This study also controls for firm size, firm growth, and annual effect (year).

The first series of hypotheses (17 hypotheses) including H1 (a, b, c, d, e), H2 (a, b, c, d, e), H3 (a, b, c), H4 (a, b, c, d) were developed to examine the relationships between the corporate governance variables and earnings quality and answer research question one. This study constructed 24 models to test the first group of hypotheses. The testing of hypotheses was carried out using univariate (descriptive statistics, correlation matrix) and multivariate techniques (panel regression analysis).

Six hypotheses (second group; H5 to H10)) are stated to answer research question two. Subsequently, 18 models are created and tested using univariate and multivariate techniques to investigate whether the interaction effect between CG mechanisms influences earnings quality.

This study follows the secondary data analysis. The main type of data in this study is panel data. By using some tests such as the Hausman test and Breusch-Pagan Lagrange Multiplier (LM) test, this study found that a random effects model is appropriate for this study. However, the statistical tests are utilised by this research are non-parametric tests. Because based on the characteristics and the nature of data, some critical assumptions (e.g. normality, Homoskedasticity), necessary for applying parametric testing, are not met. Therefore, GLS is utilised to test all models by STATA to deal with heteroscedasticity of the data. Moreover, to ensure the robustness of the results, this study employs OLS regressions.

These models are tested using a sample of 484 companies listed on the Bursa Malaysia over the period 2007-2013 – a total of 3388 firm-year observations. Firms in the financial

industries are excluded because the financial reporting requirements and disclosures of these companies are substantially different from the companies in other industries.

6.4 Summary of the Research Results (Review of Findings)

This research has designed two research questions. RQ1 addresses the association between CG characteristics and earnings quality. RQ2 addresses whether the interactions between corporate governance mechanisms have an influence on earnings quality.

6.4.1 RQ1: Do Corporate Governance Mechanisms and their Characteristics Influence on the Quality of Earnings?

Four sets of hypotheses including seventeen of sub-hypotheses are developed and tested by twenty-four models to answer RQ1 and show how corporate governance characteristics improve the quality of earnings in Malaysia based on primary qualitative characteristics of accounting information.

The key findings of the analysis of those models are summarised in some tables of this chapter. As discussed in Section 3.3.1, key players of CG mosaic are listed as (1) board of directors (BOD), (2) audit committee (AC), (3) internal auditors (IA), and (4) external auditors (EA).

6.4.1.1 Board of Directors

Consistent with hypothesis 1 that there is a relationship between board characteristics and earnings quality, five sub-hypotheses are developed and tested by this thesis. The results are summarised in Table 6.1.

Table 6.1: Summary of Hypotheses and Findings (Board Characteristics)

R Q	H1	Board Cs	Components of Attributes	Support/ Not support (-/+)	Attributes of Earnings Quality	Support/ Not Support (-/+)	Earnings Quality	Support/ Not Support (-/+)
RQ1	H1 a	BODSIZE	PV	Supported (negatively)	Relevance	Supported (-)	Usefulness of Earnings	Supported (-)
			FV	Supported (negatively)				
			Neutrality	Supported (negatively)	Faithful Representation	Supported (-)		
	H1 b	BODIND	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Supported (positively)				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H1 c	Non-CEO Duality	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Supported (positively)				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H1 d	BODMEE T	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Not supported
			FV	Supported (positively)				
			Neutrality	Not supported	Faithful Representation	Not supported		
	H1 e	BODQ	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Supported (positively)				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		

(a) Board Size

H1a assumes that there is a relationship between board size and earnings quality. The results of this study show that the board size is significantly and negatively related to both predictive value (PV) and feedback value (FV) (confirmatory value) of earnings. According to the definition of relevance based on FASB's/IASB's conceptual framework, financial information is relevant (capable of making a difference in decisions) if it has predictive value, feedback value (confirmatory value), or both. Thus, the smaller boards are more effective in increasing the relevance of earnings. Moreover, concerning the finding, the smaller boards significantly lead to neutral earnings and then the faithful representation of earnings. Therefore, when board size is small, H1a is supported with

significant improvement in quality or usefulness of earnings based on relevance and faithful representation as primary qualitative characteristics defined by the FASB/IASB conceptual framework. A possible explanation of this result is that large board size has more problem in communication and coordination. Having more people on the board (more than mean) leads to lower efficiency and effectiveness in monitoring function. It may lead to the less accountability of board members because each of them relies on others.

Based on the recommendations of MCCG (2012), each company should specify the number of members on the board, provided that it is not less than three and not more than 15. These results indicate that Malaysian companies should maintain the lower level of board size (around mean=7.55) to gain the benefit of the influence of the smaller board on the relevance and faithful representation of earnings.

(b) Board Independence

H1b proposes that there is an association between the proportion of independent directors on the board (BODIND) and earnings quality. The results show that BODIND has a significant positive association with both predictive value and feedback value of earnings. Thus, it has a positive relationship with the relevance of earnings. Moreover, based on findings, BODIND is positively and significantly related to the neutral earnings and then the faithful representation of earnings. Collectively, the evidence suggests that earnings quality (usefulness of earnings) of listed firms with a higher proportion of independent directors on the board is improved. It means H1b is also supported. A plausible reason of this result is that independence of non-executive directors play an essential role in supervising and monitoring in management, due to the assumption that they are independent, have a source of experience, knowledge, incentive, and ability, and concerned with their own reputations.

Additionally, the Bursa Malaysia Listing Requirement states that at least two, or 1/3 (whichever is higher) of the board members, should be independent directors. On average, companies complied with the Bursa Malaysia Listing Requirement, having at least 44% independent directors on the company's board. Therefore, this finding supports the regulatory emphasis on the importance of having independent directors on the board that enhance earnings quality.

(c) Non-CEO Duality

Considering the hypothesis H1c that evaluates the impact of non-CEO duality on earnings quality, the findings show that non-CEO duality has a significant positive association with both predictive value and feedback value (confirmatory value) of earnings. It suggests that non-CEO duality plays a vital role in increasing the relevance of earnings. Moreover, based on findings, the non-CEO duality is positively and significantly related to the neutral earnings and then the faithful representation of earnings. Consequently, the findings suggest that non-CEO duality leads to the earning quality's improvement (usefulness of earnings). It implies that this study supports H1c. A possible explanation of this result is that non-CEO duality does not allow the CEO to have control over the board. Thus, the monitoring task of the board is increased, which may lead to adequate supervision over the manager whose responsibility is providing reliable and relevant financial information.

MCCG (2012) prohibits combining the position of the chairman of the board of directors with any other executive position in the company. Although it is not mandatory, companies are encouraged to separate the two roles. This study also determined that approximately 82.6 % of Malaysian companies separate the positions of CEO from the board chairman. Thus, these results show that Malaysian firms should hold the separation

between the position of CEO and chairman to have a high quality of earnings based on the relevance and faithful representation.

(d) Board Meeting

Upon investigation of the relationship between frequency of board meetings (BODMEET) and earnings quality that is assumed by H1d, the findings reveal that the coefficients of BODMEET are also positive and significant for the predictive value and feedback value models. Therefore, BODMEET has a positive relationship with the relevance of earnings. A possible explanation of this result is that the number of board meetings is an indication of the board's regular and effective monitoring of the financial reporting quality of the company. However, findings show that BODMEET has no significant relationship with the neutrality of earnings. Then, the faithful representation of earnings is assumed not to be influenced by BODMEET. This result is not consistent with H1d. A possible explanation of this result is that alternative attributes of meetings may be required to enhance the quality of board meeting. Some of these attributes include the number of directors attend the meeting, the level of education and experience of those attendances, and the number of hours they spend at the meeting. Thus, H1d is only supported in terms of the earnings' relevance in a positive direction. Based on the FASB/IASB's definition, to be useful, earnings must have both relevance and faithful representation as primary qualitative characteristics. Consequently, H1d is not supported in terms of the usefulness of earnings.

One of the suggestions made by the MCCG (2012) is the regular board meetings for discussing the corporation's issues and activities. In this regard, the average number of board meetings in Malaysian firms that was found by this research is about 5.3 times, with a minimum 2, and maximum 17. Thus, these findings represent that five times meeting per year might be adequate to meet the Bursa Malaysia listing requirements and

leads to relevance. However, it cannot be sufficient to result in the faithful representation of earnings. As a consequence, the higher number of the meeting (more than five per year) or alternative attributes of meetings as explained earlier should be considered in the future reformation of MCCG or the development of new regulation in Malaysia.

(e) Board Quality

Concerning the board quality (BODQ), the result shows that BODQ is significantly and positively related to the PV, FV and neutrality of earnings as proposed in H1e and tested by models P1.2, F1.2, N1.2. Therefore, BODQ has a significant positive relationship with relevance and faithful representation of earnings and consequently, with the usefulness (quality) of earnings. It means H1e is also supported.

Board quality is measured by composite score, including four board characteristics (board size, board independence, non-CEO duality, and frequency of board meetings). Among these attributes, based on the descriptive statistics' results, the strength of board independence and non-CEO duality to calculate board quality is more than others. Because, as can be seen in the results, the large board size has a negative impact on earnings quality. Moreover, the board meeting's frequency does not impact on neutrality. However, it should be explained that although the frequency of board meeting has no significant relationship with earning quality in terms of representational faithfulness of earnings, the score of the board meeting in the calculation of the total score of board quality is assumed to be necessary. Accordingly, hypothesis H1 is supported. In answer to RQ1, overall, it is noteworthy that board attributes in Malaysian firms have a consistent relationship with earnings quality.

6.4.1.2 Audit Committee

Concerning hypothesis 2, which supposes a relationship between audit committee (AC) characteristics and earnings quality, five sub-hypotheses are developed and examined by this study. The findings are summarised in Table 6.2.

Table 6.2: Summary of Hypotheses and Findings (Audit Committee Characteristics)

R Q	H2	AC Cs	Components of Attributes	Support/ Not Support (-/+)	Attributes of Earnings Quality	Support/ Not Support (-/+)	Earnings Quality	Support/ Not Support (-/+)
RQ1	H2 a	ACSIZE	PV	Not supported	Relevance	Not supported	Usefulness of Earnings	Not supported
			FV	Not supported				
			Neutrality	Supported (negatively)	Faithful Representation	Supported (-)		
	H2 b	ACIND	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Not supported				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H2 c	ACMEET	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Supported (positively)				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H2 d	ACEXP	PV	Not supported	Relevance	Not supported	Usefulness of Earnings	Not supported
			FV	Not supported				
			Neutrality	Not supported	Faithful Representation	Not supported		
	H2 e	ACQ	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Supported (positively)				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		

(a) Audit Committee Size

Hypothesis H2a predicts that the number of AC members is associated with earnings quality. In this regard, the size of AC was found to have no significant association with PV and FV and then the relevance of earnings. One possible reason for these results is the weakness of the AC members' education, and experience since a strong argument in

the agency theory states that the larger the size of the AC the more likely it will lead to qualified earnings. However, the positively signed coefficient of AC size in the neutrality model reveals that when the AC size decreases, abnormal accrual also decreases, which leads to the neutral and then faithfully represented earnings. Thus, H2a is merely supported in the case of the relationship between the small audit committee and a faithful representation of earnings. In other words, it is not supported in terms of earnings' usefulness.

Bursa Malaysia requires a listed company to appoint an AC from amongst its directors which must be composed of not fewer than three members. Moreover, this study shows that the mean value of the AC size is 3.29. Thus, it seems that audit committees with three or more members are not more effective than those with fewer members suggesting that the minimum of AC size requested by Bursa Malaysia is effective in improving earnings quality in terms of faithful representation. However, the minimum AC size is supposed not to be effective on the relevance of earnings.

(b) Audit Committee Independence

Hypothesis H2b expects that audit committee independence (ACIND) will be associated with earnings quality. This study detected a significant positive association between ACIND and PV and no significant relationship between ACIND and FV of earnings. Based on FASB's definition, information to be relevant should have PV, FV, or both. Thus, the positive association between ACIND and PV indicates that ACIND is positively associated with the relevance of earnings. Concerning faithful representation, the result shows that ACIND is negatively related to the abnormal accrual, which leads to the neutral and then faithfully represented earnings. Therefore, usefulness or quality of earnings will be improved. It means H2b is also supported. A possible explanation of this result is that independent directors increase resources and enhance status will make the

AC more effective in fulfilling its monitoring duty of managerial functions and decisions relating to the preparation of qualified financial statements.

Furthermore, the finding of this thesis shows that the average of the percentage of independent directors on AC is 85%. This result supports the recommendation of MCCG (2012) that highlights a majority of the AC members should be independent. Thus, the finding indicates Malaysian firms' strong compliance with the MCCG's recommendation, which leads to improvement in the quality of earnings.

(c) Audit Committee Meeting

Hypothesis H2c, suggesting a relationship between the number of audit committee meetings (ACMEET) and earnings quality in Malaysian industrial firms is supported. Because, this study found that ACMEET is positively and significantly associated with PV, FV value and neutrality of earnings. Therefore, ACMEET has a significant positive relationship with relevance and faithful representation of earnings and consequently with usefulness (quality) of earnings. It implies that H2c is also supported. The possible reasons for these results could be; first, the number of its meetings is a good indicator of the AC's activity, second, the high level of independence among AC's members promotes the quality of AC meetings.

MCCG (2012) states that AC members should meet regularly at least once every quarter of the financial year to discuss issues regarding the corporation's activities. This study shows that the average number of AC meetings in Malaysian firms is about 4.8 times (with a minimum of 2, and a maximum of 11). Thus, the results represent four meetings per year might be adequate to meet the MCCG requirements in Malaysia. It means that four meetings per year seem to be sufficient in monitoring company activities, and effective in improving earnings quality based on relevance and faithful representation.

(d) Audit Committee Expertise

Hypothesis H2d reflects a significant relationship between audit committee expertise (ACEXP) and earnings quality. Contrary to the expectations, the results do not support this hypothesis. No significant association exists between ACEXP and earnings quality in terms of both relevance and faithful representation. Because this study could not find any significant relationship between ACEXP and PV, FV, or neutrality, thus, it can be concluded that mere expertise of an AC member by regulatory enforcement does not increase the quality or usefulness of earnings. Consequently, this study does not support H2d.

MCCG requirements and Bursa Malaysia Listing Requirements mandate at least one AC member must be a member of the Malaysian Institute of Accountants (MIA) to evaluate the financial expertise of AC. According to the results of this study, the mean value for ACEXP is around 0.46. It shows compliance with MCCG requirements. However, the results of the relationship between ACEXP and earnings quality were insignificant. One of the reasons for the insignificant result is that being a member of MIA merely to evaluate the financial expertise of AC in Malaysia is assumed to be insufficient. Unfortunately, the guidelines and requirements of ACEXP proved to be ineffective in increasing earnings quality in Malaysia. Perhaps other qualifications and skills are required for members to improve their expertise in monitoring activities. This matter should be considered in the revision of MCCG (2012).

(e) Audit Committee Quality

Concerning the audit committee quality (ACQ), the finding indicates that ACQ is significantly and positively associated with PV, FV, and neutrality of earnings as suggested in H2e and tested by models P2.2, F2.2, N2.2. Thus, ACQ has a significant

positive relationship with relevance and faithful representation of earnings and consequently with usefulness (quality) of earnings. It shows that H2e is also supported.

ACQ is measured by composite score, including four AC characteristics (AC size, AC independence, frequency of AC meetings, and AC expertise). The strength of all AC characteristics to calculate ACQ is essential. Because, as explained by descriptive statistics, their mean values are high and meet the MCCG's requirement. Therefore, it can be concluded that although some of these characteristics (ACEXP and ACSIZE) do not have a significant or positive influence on earnings quality, the importance of them in the evaluation of ACQ and then CG quality cannot be ignored. Therefore, hypothesis H2 is supported. In answer to RQ1, the overall results suggest that AC attributes improve the quality of earnings in Malaysia.

6.4.1.3 Internal Audit

Concerning the hypothesis 3 that there is a relationship between internal audit characteristics and earnings quality, three sub-hypotheses are developed and tested by this thesis. The results are summarised in Table 6.3.

(a) 6.4.1.3.1 Internal Audit Experience

Hypothesis H3a reflects the view that the internal audit experience (IAEXP) is considered to be a component of good CG and to provide an additional monitoring mechanism in improving earnings quality. The results show that IAEXP is positively and significantly associated with PV. However, there was no significant relationship between IAEXP and FV. According to relevance's definition by FASB (2010), the positive association between IAEXP and PV indicates that IAEXP is positively related to the relevance of earnings. Furthermore, findings show that the IAEXP has a significant positive influence on the neutrality of earnings and then the faithful representation of

earnings. Therefore, usefulness or quality of earnings will be improved. It means H3a is also supported. A possible explanation of this result is that having a higher proportion of internal audit staff with prior experience in accounting and auditing can promote the effectiveness of internal audit function (IAF) and contribute more to financial statement audits.

Table 6.3: Summary of Hypotheses and Findings (Internal Audit Characteristics)

R Q	H3	Internal Audit Cs	Components of Attributes	Support/Not Support (Sign of Coefficient)	Attributes of Earnings Quality	Support/Not Support (-/+)	Earnings Quality	Support/Not Support (-/+)
RQ1	H3 a	IAEXP	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Not supported				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H3 b	IAIND	PV	Supported (negatively)	Relevance	Supported (-)	Usefulness of Earnings	Supported (-)
			FV	Supported (negatively)				
			Neutrality	Supported (negatively)	Faithful Representation	Supported (-)		
	H3 c	IAQ	PV	Not supported	Relevance	Not supported	Usefulness of Earnings	Not supported
			FV	Not supported				
			Neutrality	Supported (negatively)	Faithful Representation	Supported (-)		

The revised MCGG and Bursa Malaysia Listing Requirements in 2012 concentrated on some internal audit reforms and particularly obliged reviewing competence and adequacy of IAF by the audit committees. In this case and following some studies such as Johl et al. (2013) and Prawitt et al. (2009), this study considered IAEXP as one of the characteristics of IAF to evaluate competence and adequacy of IAF. The mean value of IAEXP is 7.35, while this study has used the sample, including the firms to survive at least nine years. According to these results, it is proposed that the number of years since the year of IAF establishment is an important element that should be taken into consideration by companies. Thus, there should be a new regulation or reformation of

MCCG to enforce or encourage companies to establish their IAF immediately after their establishment.

(b) Internal Audit Independence

Regarding hypothesis H3b which assumes there is a relationship between internal audit independence (IAIND), the findings reveal that the coefficients of the IAIND are negative and significant in the models of PV, FV, and neutrality. This result supports this hypothesis in a negative direction as the effect of IAIND is found to be negative on relevance and faithful representation of earnings.

Moreover, descriptive statistics of this study show that around 0.53 of Malaysian companies have in-house IAF. As a result, in-house IAF is assumed to improve the quality of earnings based on qualitative characteristics of accounting information. The possible reason for this finding is that in-house IAF has in-depth firm-specific knowledge, loyalty, precious training background, and role in the crises' management and then provides better internal monitoring and greater control over the audit operations

Although it seems MCCG has been silent regarding the way of sourcing of IAF, for reviewing and evaluating the adequacy and competence of IAF, IAIND that was proposed by other studies (Ahlawat & Lowe, 2004; Al-Rassas & Kamardin, 2015a) seems to be a significant dimension. Based on the results of this study, there should be a new requirement or revision of MCCG in future that enforces Malaysian firms to establish in-house IAF to obtain the effectiveness of internal audit on improving earnings quality.

(c) Internal Audit Quality

Concerning the internal audit quality (IAQ), H3c predicts there is an association between IAQ and earnings quality. The results of testing H3c indicate that IAQ is not significantly related to PV and FV. However, IAQ significantly and negatively associated

with the neutrality of earnings. Therefore, IAQ does not influence relevance but has a significant and negative impact on the faithful representation of earnings. It means H3c is not supported in terms of relevance and unexpectedly supported in terms of faithful representation in a negative direction. Consequently, the result shows that IAQ does not have a positive impact on the quality or usefulness of earnings.

IAQ is measured by composite score, including two internal audit characteristics (internal audit experience and internal audit independence). These attributes are supposed to be not very strong to calculate IAQ. It means that it is required to consider some other characteristics such as internal audit function organisation independence, internal audit quality control assurance, internal audit financial focus activities, and internal audit investment. These characteristics are mostly collected through questionnaire design (Johl et al. 2013). Moreover, according to the descriptive statistics, the average of IAQ is 0.96. This study finds that 47 percent of the sample outsource their IAF to an outside provider. Moreover, the effect of IAIN on earnings quality is negative and significant. Then, IAIN may play a role less than IAEXP in calculating IAQ. It leads to the mean of IAQ (0.96) to be less than 50% of the total score (2). Therefore, to obtain the positive influence of internal audit on earnings quality, Malaysian firms should establish in-house IAF. In this regard, MCCG should add some new codes about internal audit function to the current MCCG. Accordingly, hypothesis H3 is not supported and is not able to answer RQ1. Thus, it is noteworthy that internal audit attributes in Malaysian firms should be reviewed or strengthened.

6.4.1.4 External Audit

Concerning the hypothesis 4, which proposes that there is a relationship between external audit characteristics and earnings quality, four sub-hypotheses are developed and examined by this study. The findings are summarised in table 6.4.

Table 6.4: Summary of Hypotheses and Findings (External Audit Characteristics)

R Q	H4	External Audit Cs	Components of Attributes	Support/ Not Support (Sign of Coefficient)	Attributes of Earnings Quality	Support/ Not Support (-/+)	Earnings Quality	Support/Not Support (-/+)
RQ1	H4 a	EASIZE	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Not supported
			FV	Not supported				
			Neutrality	Not supported	Faithful Representation	Not supported		
	H4 b	EAFEE	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Supported (positively)				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H4 c	EAIND	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Supported (positively)				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H4 d	EAQ	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Supported (positively)				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		

(a) 6.4.1.4.1 External Audit Size

Hypothesis H4a assumes that there is a relationship between audit firm size (EASIZE) and earnings quality. The results show the positive and significant association between EASIZE and PV. However, the coefficients of EASIZE is insignificant in the models of FV and neutrality. It may support this argument that Big 4 audit firm is effective in improving the relevance of earnings but ineffective in increasing faithful representation of earnings. It means H4a is supported in terms of relevance and not supported in terms of a faithful representation of earnings. Thus it may be concluded that larger audit firm size do not significantly enhance the usefulness or quality of earnings.

MCCG requirements state that in appointing an external auditor, a listed issuer must consider the adequacy of the experience and resources of the audit firm. They encourage Malaysian firms to select big4 audit firms. This argument is supported when the mean

value of EASIZE indicates that about 60% of sample firms in this study appoint Big4 as external auditors. Although the findings reveal that appointing big4 audit firm solely do not influence on earnings quality significantly, it is an important attribute to increase external audit quality. Thus, it may be concluded that Bursa Malaysia should enforce listed firms to appoint big4 audit firms for external auditing as a significant part of Malaysian's corporate governance.

(b) External Audit Fee

Using external audit fees (EAFEE) as an attribute of external audit characteristics, the result shows that EAFEE is significantly and positively related to PV, FV, and neutrality as indicators of earnings quality, as proposed in hypothesis H4b. Therefore, high audit fees generated by a client improve the relevance and faithful representation as indicators of earnings' usefulness (quality). The possible explanation for these findings is paying higher audit fees to auditors are associated with a higher auditor effort, thereby minimising the management's opportunistic earnings. Because the extensive auditor efforts may discover such opportunistic behaviour, it means this study in a positive direction supports H4b.

MCCG has been silent regarding the influence of audit fee on the quality of corporate governance in Malaysian firms. It is because payment depends on the cost-benefit pattern, which is considered by companies. However, according to the results of this study and also based on other studies and theories, paying a higher fee for external auditors may ensure external audit quality. Consequently, companies are encouraged to provide more relevant and faithfully represented earnings.

(c) External Audit Independence

Hypothesis H4c expects that auditor independence (EAIND) will be significantly associated with the earnings quality. In this regard, the coefficients of the proportion of audit fees to total audit fees (EAIND) are positive and significant in the models of PV and FV of earnings, suggesting that, EAIND have a positive influence on relevance. Furthermore, the findings show that there is a negative relationship between EAIND and abnormal accrual. As such, when the proportion of audit fees to total audit fees increases, the level of abnormal accrual decreases and neutrality of earnings advances, signifying that the EAIND improve earnings' usefulness or quality in terms of both relevance and faithful representation. The plausible explanation for these results is that EAIND increases accounting information credibility by reducing aggressive and opportunistic financial reporting. This result supports hypothesis H4c. This result suggests that clients who are a significant source of non-audit revenues for the audit firm may permit more considerable discretion over financial reporting by the auditor. Thus, this is consistent with the regulatory concern that non-audit fees impair the auditor's independence.

Moreover, according to MCCG (2012), external auditors should be independence, to access the effectiveness of auditing. When non-audit services are provided to the company, EAIND can be impaired. The AC should have procedures and policies to evaluate EAIND (MCCG, 2012). Therefore, the results of this study support the concerns of MCCG about reduced audit quality due to a lack of auditor independence. The mean value of EXIND also supports this explanation when it indicates that the proportion of the audit fees to total fees is 71.1 % in Malaysia. It means Malaysian firms attempt to avoid providing non-audit services to their clients and then present high rate auditor independence.

(d) External Audit Quality

Concerning the external audit quality (EAQ), the finding indicates that EAQ is significantly and positively associated with PV, FV, and neutrality of earnings as suggested in H4d and tested by models P4.2, F4.2, N4.2. Thus, EAQ has a significant positive relationship with relevance and faithful representation of earnings and consequently with usefulness (quality) of earnings. It shows that H4d is also supported. A possible explanation of this result is that higher-quality auditors play a vital role in external corporate governance compared to the low-quality auditor. They have a greater ability to diminish agency problems between ownership and management, thereby constraining opportunistic earnings management and resulting in the improvement of the earnings quality.

EAQ is measured by composite score, including three external audit characteristics (audit firm size, audit fee, and external audit independence). The strength of these characteristics to calculate EAQ is important. Because, based on descriptive statistics, their mean values are high and meet the MCCG's requirements. Therefore, it can be concluded that although audit firm size does not have a significant or positive influence on earnings quality in terms of FV and neutrality, the importance of it in the evaluation of EAQ and then CG quality cannot be ignored.

As a consequence, hypothesis H4 is supported. In answer to RQ1, the findings conclude that EA attributes can improve the quality of earnings in Malaysia.

6.4.2 RQ2: Do the Interactions between Corporate Governance Mechanisms Influence on Earnings Quality?

Six hypotheses are developed and tested by eighteen models to answer RQ2 and show how the interaction between corporate governance mechanisms improve the quality of

earnings in Malaysia based on primary qualitative characteristics of accounting information. The key findings of those tests are summarised in Table 6.5.

Table 6.5: Summary of Hypotheses and Findings (Interaction between CG Mechanisms)

RQ	H	Interaction between CG Mechanisms	Components of Attributes	Support/Not Support (Sign of Coefficient)	Attributes of Earnings Quality	Support/Not Support (-/+)	Earnings Quality	Support/Not Support (-/+)
RQ2	H5	BOD*ACQ	PV	Not Supported	Relevance	Not Supported	Usefulness of Earnings	Not supported
			FV	Not Supported				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H6	BOD*EAQ	PV	Not Supported	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Supported (positively)				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H7	ACQ*IAQ	PV	Not Supported	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Supported (positively)				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H8	ACQ*EAQ	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Not Supported				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H9	IAQ*EAQ	PV	Supported (positively)	Relevance	Supported (+)	Usefulness of Earnings	Supported (+)
			FV	Not Supported				
			Neutrality	Supported (positively)	Faithful Representation	Supported (+)		
	H10	BOD*IAQ	PV	Supported (negatively)	Relevance	Supported (-)	Usefulness of Earnings	Supported (-)
			FV	Not Supported				
			Neutrality	Supported (negatively)	Faithful Representation	Supported (-)		

6.4.2.1 Board Quality & Audit Committee Quality

Hypothesis H5 predicts that the interaction between board quality (BODQ) and audit committee quality (ACQ) has an influence on earnings quality. The results indicate that

BODQ and ACQ and interaction between them do not have any significant influence on PV and FV and then the relevance of earnings.

In terms of a faithful representation of earnings, the impact of BODQ and ACQ on neutrality is negative. However, the interaction between them shows a positive effect on neutrality and consequently on the faithful representation of earnings. In other words, they have a joint effect on the faithful representation of earnings. For this reason, H5 is only supported in terms of a faithful representation of earnings. As discussed in chapter 2, based on the FASB/IASB's definition, to be useful, earnings must have both relevance and faithful representation. Therefore, usefulness or quality of earnings may not be improved by the interaction between BODQ and ACQ in Malaysian listed companies.

6.4.2.2 Board Quality & External Audit Quality

Hypothesis H6 proposes that the interaction between board quality (BODQ) and external audit quality (EAQ) influences earnings quality. The findings show that BODQ and EAQ and interaction between them do not have any significant influence on PV of earnings. However, the interaction between BODQ and EAQ has a positive and significant effect on FV of earnings even though EAQ is not significantly correlated with FV and BODQ is also negatively associated with FV. Thus, it can be explained that they have a joint effect on the relevance of earnings.

Concerning neutrality, although BODQ is positively and significantly and EAQ is negatively and significantly correlated to abnormal accrual, the negative and significant association between BODQ*EAQ and abnormal accrual indicates a possible joint effect or relationship between them in Malaysian listed companies. Thus, external audit supposed to moderate the association between board quality and earnings quality in terms of neutrality and then a faithful representation of earnings. It means H6 is supported in terms of both relevance and faithful representation of earnings. As a consequence, the

findings show that the interaction between BODQ and EAQ might have an influence on earnings usefulness in Malaysian listed companies.

6.4.2.3 Audit Committee Quality & Internal Audit Quality

Hypothesis H7 proposes the influence of the interaction between audit committee quality (ACQ) and internal audit quality (IAQ) on earnings quality. The results indicate that ACQ, IAQ, and interaction between them do not have any significant influence on PV. However, they have a significant positive impact on FV. It means they have a joint effect on the relevance of earnings.

Concerning neutrality, the results show a negative and non-significant effect of ACQ and a significant negative effect of IAQ on neutrality. However, surprisingly, this study reports the moderating effect of ACQ on the relationship between IAQ and earnings' neutrality. These results support the theory of joint effect between ACQ and IAQ in the relation between them and the faithful representation of earnings. Therefore, H7 is supported in terms of both relevance and faithful representation of earnings. As a result, this study reports that interaction between ACQ and IAQ may be effective on the usefulness of earnings in Malaysian listed companies.

6.4.2.4 Audit Committee Quality & External Audit Quality

Hypothesis H8 predicts the influence of the interaction between audit committee quality (ACQ) and internal audit quality (IAQ) on earnings quality. The results indicate that the interaction between ACQ and EAQ has a significant positive impact on PV. In contrast, ACQ and EAQ solely do not have a significant impact on PV of earnings. These results indicate that EAQ and ACQ have joint effects or complementary roles within the CG. In the case of feedback value, the result shows that there is no significant association between FV from one side and ACQ, EAQ, and ACQ*EAQ from other sides. However,

ACQ and EAQ have moderating effects on each other in improving the relevance of earnings. Because, as explained earlier, the information should have predictive value, feedback value, or both in order to be relevant.

In terms of neutrality of earnings, this study indicates that the interaction between ACQ and EAQ has a significant positive effect on the neutrality of earnings. In contrast, ACQ and EAQ have a significant but negative influence on neutrality. It means ACQ can positively and significantly moderate the association between EAQ and neutrality of earnings. In other words, the results show that EAQ and ACQ have joint effects on faithful representation of earnings. Accordingly, H8 is supported in terms of both relevance and faithful representation of earnings. It implies that the interaction between ACQ and EAQ may have an influence on earnings usefulness in Malaysian listed companies.

6.4.2.5 External Audit Quality & Internal Audit Quality

Hypothesis H9 assumes that the interaction between internal audit quality (IAQ) and external audit quality (EAQ) influences earnings quality. The results show that IAQ and EAQ are negatively and significantly associated with PV while the interaction between IAQ and EAQ has a significant positive impact on PV of earnings. These results indicate that IAQ and EAQ have complementary roles or joint effects on PV of earnings. Contrary to PV, this study reports no significant association between IAQ, EAQ, and IAQ*EAQ from one side and FV from the other side. Nonetheless, the interaction between IAQ and EAQ influences the earnings' relevance.

This study also provides no evidence for the existence of associations between the EAQ and neutrality. Moreover, the results show that IAQ is significantly but negatively related to the neutrality suggesting that there is a negative impact on the faithful representation of earnings. However, the evidence depicts a contrasting trend for IAQ*EAQ, suggesting that the interaction between IAQ and EAQ has a positive and

significant influence on neutrality. It supports the theory of joint effect between IAQ and EAQ in the relationship with the neutrality of earnings. It means that that IAQ and EAQ moderate each other to improve the faithful representation of earnings in Malaysia. Consequently, H9 is supported in terms of both relevance and faithful representation of earnings. It means that the interaction between EAQ and IAQ may have an influence on earnings usefulness in Malaysian listed companies.

6.4.2.6 Board Quality & Internal Audit Quality

Hypothesis H10 reflects that the interaction between board quality (BODQ) and internal audit quality (IAQ) influences earnings quality. This study shows that BODQ positively and significantly is related to PV of earnings. However, there is no significant association between IAQ and PV of earnings. Regarding interactive variable, there is a significant negative relationship between BODQ*IAQ and PV. A plausible explanation is that IAQ negatively and significantly moderated the effectiveness of board to improve earnings quality in Malaysian companies, and there is a substitution relationship between BODQ and IAQ. Moreover, the results show that IAQ, BODQ, and the interaction between them have no significant impact on FV of earnings. Therefore, the interaction between IAQ and BODQ has a negative effect on the relevance of earnings.

This study also presents that the interaction term between IAQ and BODQ is negatively and significantly associated with the neutrality of earnings. However, looking at IAQ and BODQ, the results show a significant positive effect on neutrality. It means that the benefit from high BODQ or IAQ is reduced by increasing the benefit attributed to the interactive variable suggesting a possible substitution effect between BODQ and IAQ. It means that high IAQ in interaction with high BODQ may appear to have a negative effect on the faithful representation of earnings. As a consequence, H10 is supported in a negative direction in terms of both relevance and faithful representation of

earnings. It implies that the interaction between BODQ and IAQ may have a negative influence on earnings usefulness in Malaysian listed firms.

6.4.3 Robustness test

The final robustness check is using an OLS regression technique instead of a GLS regression technique used in the primary analysis. This study found that the OLS regression's results regarding the influence of corporate governance characteristics on earnings quality are similar to those of OLS except some attributes such as board size, board independence, and AC size.

The results of OLS analysis do not support H1a in terms of FV of earnings. However, eventually, it is supported in terms of relevance in both methods of OLS and GLS. Moreover, H1b is not supported in terms of the relevance of earnings in the OLS regression model, while GLS supports it. Finally, while H2a is supported in terms of a faithful representation of earnings in GLS regression model, it is not supported by OLS.

There are some differences in coefficients, the direction of the association, and the significant level of relationship in some interaction models, as explained in table 5.27. However, the results of the OLS are assumed to be similar to GLS regression models in the case of joint effects between some variables.

In general, these findings suggest that firms with effective corporate governance mechanisms improve earnings quality based on primary qualitative characteristics. Although not all corporate governance variables support the stated hypotheses, the study has achieved its objective by identifying the attributes that answer the research question. This study, therefore, finds that agency theory and resource dependence theory offers a generally good explanation of the associations between corporate governance mechanisms with earnings quality's attributes.

6.5 Implication of the Study

The findings of this thesis should be of potential interest to investors, corporations, regulators, policymakers, and researchers, particularly on the issues related to earnings quality and CG practice.

6.5.1 Investors

Evidence of relevant and faithful represented financial information produced through good governance is valuable for the investors' decision-making processes and decrease their investment risk and cost of capital. The loss of confidence displayed by investors due to the lack of protection for their investment in Malaysia was apparent during the Asian financial crisis (discussed in Section 2.2.2 of Chapter Two). In this regard, Malaysia has had three reforms (2007, 2012, and 2016) during the recent decade to increase investors' confidence. This country has secured the 4th position among the world's top countries in attracting investors, especially foreign investors. Thus, from the perspective of emerging economies, sound corporate governance systems serve as an incentive for foreign investment (Alnasser, 2012).

Investors, shareholders, and stakeholders need to be confident in the firms' financial information in order to make investment and to evaluate the firm performance. This study discloses findings that will help participants in the stock market and investors to enhance their decision-making. This study documents that the relevance and reliability of corporate financial information, especially earnings, are influenced by the quality of the corporate's governance structure. Investors and other stakeholders should inspect the governance system of the corporation to comprehend how systems are being worked. Measuring the various attributes of CG permits investors to be aware of the capacity of executives to manage earnings for opportunistic behaviour. Thus, it can help investors evaluate the FRQ of the company and the reliability and relevance of earnings numbers.

The professionals, such as financial analysts, may use the findings to integrate the study on how the market perceived strong CG as improving earnings quality influences the decisions of the capital market. If the market realises the firms with strong CG are related to higher earnings quality, the reported financial statement may be considered as more relevant and reliable for the decision of investment and the assessment of credit.

6.5.2 Corporation

This thesis has practical implications for corporations when they need to convince shareholders and to attract potential investors. Measuring the influence of monitoring systems such as CG permits decision-makers to assess the role of these monitoring systems in improving shareholders' understanding of the financial information quality. Shareholders' financial decisions can become more precise and useful if they can obtain reliable information about firm performance.

Having a strong and sound CG structure that minimises the probability of management opportunistic behaviour will boost the corporations' control over management and improve their shareholders' confidence. The findings of this study produce useful information for developing policies and CG structures of the company. For example, instead of just accepting the suggested Code of CG, corporations might intend to consider the influence of an independent board of directors and a small board on effective control and monitoring. The recommendation of the corporate governance code seems to be insufficient concerning audit committee expertise. That is why companies would like to enhance the audit committee's expertise to secure their effectiveness. Therefore, corporations can use the findings of this study besides the Code of CG to set the sound governance system.

6.5.3 Regulators and Policy Makers

The results of this thesis offer little support for the existence of a link between changes in governance requirements/recommendations and earnings quality. The authorities of CG, particularly in Malaysia, can employ this research as experiential support for making more recommendations on CG and expanding their regulations. Hence, this study's findings provide important implications for policymakers and regulators.

Besides, the findings provide some implications for regulators such as Security Commission Malaysia (SCM) trying to increase the FRQ. Regulators may convince investors by producing more effective legal activity and charging fines on those who act aggressive earnings management. They may also encourage companies to observe ethics standards by developing their understanding of the significance of investor protection. Therefore, SCM is called on to find ways to control more on management and safeguard financial reporting from ways utilised for manipulating earnings by expanding domestic accounting standards or other rules such as MCCG.

The findings of this study can also be employed by stock market authorities to assess the current requirements of the disclosure of CG practices. Regulator and policymakers should also prudently evaluate the effectiveness of Malaysian CG in improving the FRQ. This study's results propose that which CG characteristics are likely to be effective or ineffective on earnings quality. Thus, to increase efficient and effective monitoring over management, the improvement of guidelines that reflects the quality of CG characteristics should be necessary.

The public relies on the ability and effectiveness of CG since CG was established as a monitoring mechanism and control system for corporate behaviour. This study provides empirical evidence on the relationship between specific CG characteristics and earnings quality.

This thesis also indicates that specific CG characteristics that should be effective in increasing earnings quality are in fact, not effective in Malaysia. For example, the findings show that audit committee expertise seems to be ceremonial, and it has no impact on earnings quality. The results of this study warn regulators that the membership of MIA (as recommended by MCCG) by at least one member of the audit committee may not be an appropriate evaluation of the audit committee expertise. Some multi-aspects training programs may increase the expertise of the audit committee's members. Thus, this feature can be taken into consideration by regulators to determine the audit committee expertise in the study of CG.

The finding of this study shows when the audit committee size increases, the earnings quality decreases. It means the minimum of audit committee size that has been requested by Bursa Malaysia (3 members) is enough to influence on earnings quality.

Concerning the board size, MCCG 2012 does not advocate an optimal size for the board of the companies, and it emphasises that the board should investigate its size, specifying the size's impact on its effectiveness. In this case, this study finds that the number of directors in listed companies must not exceed the average number of board size (7.55). Since, when board size increases, the earnings quality reduces. Therefore, more consideration should be taken on improving Malaysian CG structures.

This study offers some useful perception for policymakers and regulators to consider the importance of the role of BODIND and ACIND in the company's governance in improving the financial information quality. The requirement for a higher number of independent directors on the board and its sub-committees is a central topic of recent reforms of CG in Malaysia so that the shareholders' interest can be appropriately manifested. Indeed, this research finds that BODIND, ACIND, ACMEET, and non-CEO duality also are all critical attributes that significantly enhance earnings quality and seem to be advantageous to the governance of the companies in Malaysia and support the code

recommendation. Thus, in future CG recommendations, these attributes should be strengthened and secured. Regarding the effectiveness of the frequency of board meetings in reducing abnormal accrual (neutrality), this research fails to find a significant relationship. It means the measurement of the diligence of the BODIND and its sub-committees cannot be done singly by the meetings' number. Thus, more appropriate measures of diligence that can be listed as meeting agendas, meetings' length, attendance at meetings, and participation in meetings' discussion should be included in disclosure requirements and future codes.

Concerning internal auditors, the policymakers should regularly realise that experienced and in-house internal auditors play an important role as one of the essential characteristics of the CG system in Malaysia since the governance systems of the companies were improved by the monitoring effects of experienced and in-house internal auditors.

From the external audit perspective, the results of this study document that if audit and non-audit services are provided at the same time, the constant concern regarding the deterioration of the EA independence exists. This research finds that when the external auditors provide non-audit services for their audit clients, auditors' independence deteriorates. It, thus, affects the FRQ. Moreover, based on the results of this study, appointing Big 4 audit firm with high audit fee by companies can be pointed out by regulators or policymakers to secure external audit quality in monitoring the integrity of financial reporting process.

Policymakers may use the findings regarding interactions between corporate governance's key players to recognise the potential advantages of the substitution or joint effects of CG mechanisms.

Finally, the findings show that some corporate governance mechanisms need some attention from regulators and policymakers. Evidence from empirical studies such as

evidence suggested by this research can provide a foundation for the development of new corporate governance regulations or revision of existing CG codes.

6.6 Contribution of the Study

6.6.1 Contribution to the Literature

Concerning the literature on the association between earnings quality and CG, this research extends prior studies by comprehensively examining the influence of CG characteristics on earnings quality. Rezaee (2004) states that CG is a monitoring mechanism for evaluating the accountability and responsibility of corporate via the board of directors, audit committee, management, and internal and external auditors to protect and serve shareholders. Based on MCCG, CG functions are classified into two major groups: 1) the function of each mechanism of CG (i.e., a board of directors, audit committee, internal audit, and external audit) and 2) interaction between CG mechanisms. Schipper and Vincent. (2003) explain that although earnings quality is not individually defined, it is one of the most comprehensive measurements for evaluating the FRQ. This study follows the FASB/IASB conceptual framework to measure earnings quality based on primary qualitative characteristics of accounting information (relevance and faithful representation). Thus, this detailed exploration provides a more comprehensive understanding of the responsibility of CG in enhancing earnings quality. This contribution is justified because these parameters are used internationally to explain the quality of accounting information.

6.6.2 Contribution to the Practice

The findings of this thesis are assumed to contribute to the investors or users of accounting information to rely on the accounting information provided in a company with a strong governance structure. The result of this study is expected to add value to those who invest in the Malaysian Stock Exchange by acquiring accurate information regarding

the listed companies, which in turn, may help in obtaining relevance and faithful representation of accounting information in making rational decisions. Moreover, the findings are assumed to help shareholders and stakeholders comprehend preferences for beneficial investment forecasts.

Findings from this research are anticipated to be substantial for regulators and standard-setters who seek a link between specific characteristics of CG and earnings quality, primarily based on the qualitative characteristics of accounting information. They intend to know what the appropriate governance characteristics are and how they are better linked to FRQ, and how key players in CG mosaic interact with each other to improve earnings quality. The results of this study help them to find the answers to their questions.

6.6.3 Contribution to the Methodology

In terms of methodology, this study extends previous research by addressing problems associated with earnings quality measures. Regarding the process of methodology, this study will contribute to the literature by using primary qualitative characteristics of accounting information (based on FASB/IASB' Conceptual Framework) which may not have been employed before and will assay to explore new measures of earnings.

Moreover, this study uses a new approach which is moderating the link between each corporate governance mechanism and earnings quality by alternative corporate governance mechanisms. According to the literature, these interactions have rarely been examined before. In addition, to capture the interaction between corporate governance mechanisms, this research measures the effectiveness or quality of each mechanism (such as board, audit committee, internal audit, and external audit) by calculating composite scores based on important attributes or characteristics of those mechanisms (such as board

size, audit committee size, and so on). There is also little research to explore the quality of CG mechanisms by using the composite score.

6.7 Limitation of the Study

Although this study attempts to provide several contributions, some caution should be taken into consideration in interpreting the findings. It is the nature of any human work to be incomplete. Thus, this thesis is not an exclusion as it has potential limitations regarding the results that will be discussed in this section.

6.7.1 Data and Sample Limitations

The selection of the study sample is based on predetermined criteria. Examining a non-random sample of firms, as this study does, introduces an inherent bias and possible inaccurate associations arising from the sample design. However, because there is a limited number of firms that disclose comprehensive and relevant corporate governance information publicly, it is tough for corporate governance studies in Malaysia to select firms randomly. Another sampling concern is the sample size about the validity of statistical conclusions and the probability that the statistical results are representative of the actual relationship within the data set.

This study uses Malaysian data. Capital markets of other countries have different practices, economic features, and regulations. They may demonstrate various characteristics in terms of corporate governance, size, and the number of listed companies. Therefore, caution should be taken in the generalisation of results to other countries' stock markets. Nonetheless, the findings' similarity of this thesis and the results of the studies in other countries show a high level of generalisability.

This study includes firms based on the availability of data to evaluate CG characteristics and earnings quality variables. Only firms that possess a comprehensive set of data during a nine-year period of 2006-2014 are included. Therefore, the data might

suffer from sample bias towards surviving firms. Companies included in the sample are more likely to be more successful and larger than companies that are not included in the sample, as less successful and smaller firms might not remain during the nine years. In other words, smaller firms are more likely than larger firms to be delisted.

The sample for this study is selected from the non-financial industries. Therefore, this study's results may not be attributed to financial companies because the governance structures differ based on industry.

Additionally, since this study employed sample periods across the two sets of corporate governance reforms (MCCG 2007, MCG 2012), it is anticipated that the variations in the years before, after or during the reformation may influence the results. Therefore, dividing the sample period to two sets of CG reforms and interpreting the results based on the pre and post-reform periods were excluded from the model estimation to reduce noise and prevent obscurity of results.

6.7.2 Constructs and Variables Limitations

Regarding the effectiveness or ineffectiveness of corporate governance in improving earnings quality, caution should also be taken. There is the probability that the significant influence of some CG characteristics, which results in better management's control, may not be because of the only effectiveness of the CG structure, but the integrity of the management themselves. Management can be very behavioural and ethical, leading to effective governance, or it can be otherwise. Moreover, if the members on the board themselves do not have strong ethical worth, having the perfect code of CG does not assure CG effectiveness.

Furthermore, the examination of a certain set of CG characteristics is a limitation which is required to be taken into consideration when the results are interpreted. The

parameter estimates may be biased if other CG characteristics contribute to the quality of accounting measures.

There may be alternative proxies for measuring the internal and external audit quality variables other than is proposed by the constructs of this study. In this thesis, the external audit quality is measured by the audit firm size, audit fee and auditor independence. However, the use of other external audit quality measures such as the experience and number of professional and supervisory staff dedicated to the specific audit (MCCG requirements), may assist in generalising the effect of the actual external audit quality on earnings quality. Moreover, in this research, internal audit quality is measured by internal audit experience and independence. However, some other attributes can be utilised to evaluate internal audit quality such as size, competence, objectivity and the financial focus of internal auditing (Prawitt et al., 2009), internal audit quality control assurance, and internal audit investment (Johl et al., 2013) which may impact their monitoring effectiveness of internal auditing. It should be claimed that due to the limitation of the secondary data, this study only uses attributes mentioned above as components of external and internal audit characteristics, respectively. However, different measurements of internal and external audit quality could be considered in future research.

The validity of the results of this study depends on predictive value, feedback value and neutrality as some proper measures of earnings quality. As explained in Section 2.3.5, there are alternative measures of earnings quality. The utilising of such measures may provide different results because the measures offer different aspects of earnings quality. It means three attributes of earnings quality do not entirely represent all dimensions of earnings quality. For instance, in this study, the results between BODMEET, ACSIZE, ACIND, ACEXP, IAEXP, EASIZE from one side and earnings quality from other side are mixed, based on the three proxies (PV, FV, and neutrality) used. Thus, the results based on the relationship between corporate governance and earnings quality could

depend on how earnings quality is defined. Hence, future research should consider more diverse sets of measurements that may reflect the earnings quality differently.

Some variables may probably be affected by some measurement error. For example, this thesis measures neutrality based on the accrual quality using the Modified Jones Model (1995). Therefore, the probability of misclassifying the discretionary and non-discretionary accruals may criticise the accruals measures. Thus, the result of this research may not be generalised to other measures of accrual quality.

Moreover, there may still be some omitted variables that have not been controlled, although this thesis endeavours to control some factors influencing the earnings quality of the company. This research aims to explore the association between earnings quality and attributes of monitoring mechanisms. In other words, the objective of the study is not to explore the causality. Therefore, the effect of this limitation may not be considered as a significant consequence. Given these limitations, caution should be taken into account in interpreting the results and the significance of the study.

6.8 Recommendations

According to findings presented by this study, it can be concluded that earnings still need to be improved in Malaysia. Accordingly, the regulator can only attempt to improve it by, for instance, requiring companies to activate the role of CG mechanisms in the financial reporting process. In general, some recommendations may contribute to enhancing the Malaysian code of CG, increasing the effectiveness of CG mechanisms, and then improving the earnings quality in Malaysian institutions. It is one of the emphasised topics in the MCCG 2016 draft proposal. Therefore, this study recommends regulators, standard-setters, and responsible agencies;

- 1) to increase the understanding of the concept of CG mechanisms and its responsibility in developing the Malaysian economy and market.

- 2) to develop the Code of Corporate Governance Practices in Malaysia by revising requirements and applying practical guidelines to hold the average number of directors on the board and the average number of members on the AC.
- 3) to increase the importance of having independent members on the board and audit committee and having frequent meetings.
- 4) to highlight the importance of the separation of CEO from the chairman of Malaysian companies.
- 5) to activate the responsibility of audit committees by improving the skills, expertise and capabilities of members through organising multi-aspects training programs to describe their expertise. Taking only one aspect of expertise into consideration (for example, being a member of the MIA) should not be adequate to evaluate audit committee expertise.
- 6) to underline the significance of more experienced internal audit members on the internal audit department and the importance of in-house IAF.
- 7) to enhance the auditor's independence in Malaysian audit firms and encourage Malaysian firms to hire Big 4 auditors with high audit fees.

6.9 Avenues for Further Research

The results of this study reveal that several CG characteristics are significantly associated with earnings quality. Several topics could be relevant to the relationship between CG and earnings quality. However, they are not covered by this research. Therefore, this thesis' findings open up some avenues for further research. There are several procedures to develop what examined in this study.

Examining additional CG characteristics that may impact earnings quality is one of the possible methods for further research. For instance, a future study could include the characteristics of remuneration and nomination committees. Moreover, future studies

could extend this study by exploring the relationship between ownership structure and primary qualitative characteristics of accounting information.

This study would also be extended by an exploration of family culture in Malaysian corporates and its relationship with earnings quality based on fundamental qualitative characteristics of accounting information.

Future studies can use alternative measures for earnings quality such as persistence, value relevance, smoothness, and so on when they intend to investigate the association between interaction effects among CG mechanisms and earnings quality.

Since this study excludes certain industries, an opportunity exists for future scholars to study the influence of CG on earnings quality in the financial industries. Using the financial firms of Malaysian sample such as banks and insurance companies may give more robust results since these would include different firms in terms of performance.

Since corporate governance was based on MCCG 2007 and 2012, future research is advised to develop this research by exploring the role of CG based on MCCG 2017, especially when most listed companies are entirely compliant with the disclosure and regulations.

Copying this research by using other international stock markets' data is probably to provide understanding into various markets responses to CG roles and earnings quality. This study can be carried out in other countries based on their code of CG, and then different CG attributes can be included.

A comparative study between Malaysia and any other developing countries can be carried out in terms of the association between earnings quality and corporate governance. Furthermore, the comparison could be extended to become an international study by including other countries from different areas and different institutional and government settings.

In addition, collecting data can be done through the questionnaire (primary data analysis). It will contribute to strengthening the results acquired from the secondary data.

Eventually, this thesis investigated the relationships between CG and earnings quality from a positivist perspective by using quantitative evaluation methods. Further research might produce more and detailed analysis with the application of the qualitative techniques to help comprehend how CG mechanisms associate to the earnings quality of the firm. In other words, in addition to the positivist paradigm (as this study did), future scholars can analyse this topic from the interpretative or critical perspective. It could provide a more detailed description and comprehension of the governance's problems.

6.10 Summary

This chapter provides the conclusions and a summary of this thesis. After representing the research problem and questions, it outlines the research methods assumed to provide an appropriate answer to the research questions.

This chapter also summarises the results of the research and discusses their implications and contributions. Subsequently, the potential limitations of the study are stated before recommendations for further research are pointed out.

This study examines the relationship between CG (proxied by four characteristics based on MCCG) and the earnings quality (proxied by two main attributes such as relevance (predictive value and feedback value) and faithful representation (neutrality) of earnings based on primary qualitative characteristics of accounting information defined by FASB/IASB (2010).

The study proposes and finds that certain corporate governance characteristics improve earnings quality in terms of both relevance and faithful representation. The results reveal that board independence, non-CEO duality, audit committee independence, frequency of audit committee meeting, internal audit experience, external audit fee, and external audit

independence are all positively associated with earnings quality (usefulness) at significant levels.

The results suggested that some of the strong corporate governance characteristics were not able to improve earnings quality. However, some of the variables that were found to be significant in this study can guide users in assessing companies' published information.

Effective corporate governance will result in better monitoring and controlling management activities and corporate reporting. Sound corporate reporting increases the usefulness of published earnings information in decision-making. Therefore, more effective corporate governance would give users assurance of the earnings' usefulness and reliability. In summary, the findings of this study indicate that well-balanced corporate governance mechanisms are required to achieve high-quality financial reporting (reliable and relevant accounting earnings).

The primary contribution to the knowledge of the thesis is to extend the literature on the role of corporate governance in increasing earnings quality in terms of primary qualitative characteristics of earnings. Participants of the stock market use the results of this study in their assessment of the roles of CG in improving the earnings quality. This study also has practical implications for corporations' needs to satisfy shareholders and to attract potential investors. Moreover, the results would be helpful to the regulators in characterising sound CG characteristics and evaluating the needs for the disclosure of CG practices.

The quality of earnings is difficult to quantify, and it is difficult to define. However, this thesis attempted to measure earnings quality based on primary qualitative characteristics defined by FASB/IASB (2010). This thesis also mainly focused on the effectiveness of certain CG characteristics on certain variables of earnings quality. Therefore, this thesis proposes that other CG characteristics and earnings quality

measures should be examined by further research to determine the associations between them. Also, since the selection of the study sample is based on non-random sample of non-financial Malaysian firms during a nine-year period of 2006-2014, using other countries' data, alternative years, and data included financial firms are recommended for future research. Moreover, using qualitative analysis by employing critical perspective or interpretative is recommended for further studies to understand how corporate governance mechanisms relate to the quality of earnings.

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