# AUDIT COMMITTEE CHARACTERISTICS, TRUST AND AUDIT QUALITY:

## **EVIDENCE FROM HONG KONG**

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## Declaration

I declare that the fulfilling of this thesis entitled "Audit Committee Characteristics, Trust and Audit Quality: Evidence from Hong Kong" is a result of original research work, and that I have acknowledged anyone who gave me any help during this work. I confirm that this work has not been submitted for a degree or as part of the requirement for a degree at any university or institution other than the University of the West of England.

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### ABSTRACT

This thesis comprises of two parts. Part One of the thesis denotes an archival modelling study that evaluates the relationships between effective audit committee characteristics (size, independence, financial expertise, meeting frequency, directorship, tenure and age of audit committees) and perceived audit quality in Hong Kong. Part Two is a questionnaire survey study exploring the effects of external auditors' trust in audit committee members on both their interactions and perceived audit quality in Hong Kong.

In the archival modelling study, discretionary accruals estimated by the modified Jones model were employed in order to measure perceived audit quality. Fixed effect panel data regression with robust standard errors was used as primary analysis. On the basis of data obtained from the Hong Kong Hang Seng Composite Index between 2010 and 2015, the findings suggest that their financial expertise, size, tenure and age are important determinants of perceived audit quality. This result indicates that their expertise enables them to fulfil their oversight role competently, whereas their size provides them with sufficient resources to be able to perform their roles. Similarly, their length of tenure enables them to obtain more experience and knowledge of the operations of companies, while their age indicates that they may have less energy to perform their oversight role and have difficulties in keeping abreast of changing environment of companies. Thus, an audit committee with old members may reduce audit quality. Audit fees and choice of auditor are used as the measures of audit quality for the robustness checks. The results of robustness checks demonstrate that a large audit committee with financial expertise demands

greater efforts from external auditors, as indicated in higher audit fees. However, audit committee members' directorships are found to be negatively associated with audit fees but positively related to the appointment of Big 4 auditors.

In the questionnaire survey study, perceived audit quality is measured based on external auditors' interactions with audit committee members. Semi-structured questionnaires were used in order to assess the levels of their trust in audit committee members and their interactions. Ordinary least square with robust standard errors, independent t-tests and thematic analysis were used in this study. According to the findings, the external auditors trust them because they have and display integrity, competence and goodwill. These findings also suggest that their trust in audit committee members improve their interactions in terms of sharing information, devoting their time and efforts to an external audit and providing their comments on managers.

Overall, both findings are congruent with agency theory and social interdependence theory. On the one hand, agency theory states that higher quality audit committees are associated with effective monitoring, which, in turn, helps to improve audit quality so that earnings management is constrained. On the other hand, social interdependence theory states that when two parties (external auditors and audit committee members, in this case) depend on one another, they will try to improve their interactions so that their common goals (high audit quality) can be achieved on the basis of trust. The findings are of potential interest to policy makers, professionals, boards of directors and audit firms, particularly on issues relating to audit quality and the mandating of corporate governance practices.

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# LIST OF ABBREVIATIONS

Variables	Definition
ABSAUDQ	Absolute value of discretionary accruals based on modified Jones
	model
AC	Audit committee
ACM	Audit committee member
ASAUDQ1	Indicator that the absolute value of discretionary accruals is high-
	er than the sample median
LOGACSIZE	Natural log value of number of audit committee members on an
	AC
ACIND	Audit committee independence
АССОМ	Audit committee financial expertise
LOGACDIL	Natural log value of number of audit committee meetings
ACDIRECT	Audit committee members' average number of directorships
ACTENURE	Audit committee members' average tenure on the board
ACAGE	Audit committee members' average age
LOGBSIZE	Natural log value of number of board members
BIND	Board independence
LOGBDILIGENCE	Natural log value of member of board meetings

BDIRECT	Board members' average number of directorships
BAGE	Board members' average age
CUMBOADEQUITY	Board members' equity position in a company
DUALITY	Duality of CEO and chairman
EAs	External Auditors
INSTITINVESTORS	Number of institutional investors
NI	Net assets normalised by lagged total assets
INHERENT	Inherent risk
NAF	Proportion of non-audit fees to total fees
LEV	Leverage
SIZE	Natural log value of total assets
AUDITOR	Auditor choice
LOGAFEE	Natural log value of audit fees

# CHAPTER 1 INTRODUCTION

The effectiveness of the audit committee's oversight role has received great attention from regulators, audit firms, as well as financial statement users since the reliability of financial statements and audit quality has been questioned after financial scandals (Basiuddin, 2011; DeFond and Francis, 2005).

Agency theory explains why external audits and corporate governance are required to protect the interest of shareholders. Since they do not participate in day-to-day operation of a company, they tend to depend upon managers to manage a company's operations. However, managers may not always act in the best interest of shareholders, which is why external audits and corporate governance mechanisms are required to protect their interest (Chen et al., 2006; Beasley, 2000; Cadbury, 1992; Denis et al., 1997; Fama and Jensen, 1983; Jensen and Meckling, 1976; Wallance, 1980). The agency theory will be discussed in greater detail in Section 2.2.1.

One of the corporate governance mechanisms is the oversight of audit committees (abbreviated to AC in the entire thesis) on the integrity of financial statements and quality of external audit that provides independent checks on the integrity of financial statements (Sarbanes-Oxley, 2002; UK Corporate Governance Code, 2010) so that agent-principal conflict is reduced. Therefore, it should reduce the probability that accounting frauds and aggressive earnings management occur;

for this reason, financial statement users may use these statements to make appropriate decisions (Liao and Hsu, 2013; Carcello et al., 2011; Duchin et al., 2010). Regulators are of the view that effective corporate governance improves the ability of the board and ACs to oversee managers, external audits and financial statements for the shareholders' interest (Sarbanes-Oxley 2002; UK Corporate Governance Code 2010). Therefore, it is argued that effective AC characteristics should improve the effectiveness of their oversight effort in mitigating agent-principal conflict by monitoring audit quality.

Furthermore, in the context of external audit, ACMs are required to interact with external auditors (EA) to ensure high quality audit. For example, the interactions include their engagement in discussions with ACMs on clients' operations, significant risk areas, managers' integrity and behaviour, indicators of frauds and progress and scope of an external audit (HKICPA, 2015; Chartered Professional Accountants of Canada, 2014). EAs are expected to discuss significant and critical accounting policies and estimates with ACMs, so they better understand specific accounting policies relevant to the firm and industry and whether the estimates are appropriate (PCAOB, 2012). Another example is discussion on the significant usual transactions (PCAOB, 2012). The discussions enable EAs to assess the risk and nature of the transactions so that they understand how to perform appropriate audit approaches on the transactions. They also communicate with ACMs for difficulties encountered in performing the audit (PCAOB, 2012). One of the difficulties is managers' incooperation. This allows ACMs to understand how to require managers to cooperate with EAs. These interactions are expected to positively impact the quality of an external audit. Extant studies suggest that trust is an important factor that improves interactions between actors (Minnar et al., 2017; Bogt and Tillema, 2016; Bien, Ben and Wang, 2014; Oortmerssen, Woerkum and Aarts 2014; Cullen, Edelenbos and Eshuis, 2012; Silva et al. 2012; Robson, Katsikeas and Bello, 2008; Berends et al., 2006; Johnson and Sakano, 2000). Hence, it can be expected that EAs' trust should encourage them to interact with ACMs with effects on the efficiency and effectiveness of an external audit leading to enhanced audit quality.

However, prior studies suggest that the impacts of AC characteristics on audit quality in Hong Kong were conducted on data in the years preceding the global financial crisis in 2008 (Cheng, Lui and Shum, 2015; Lin, Hutchinson, and Percy 2015; Chan et al., 2011; Cheung et al., 2011; Chau and Leung 2006; Ching, Firth, and Rui, 2006; Jaggi and Leung, 2007). In addition, the scope of the prior studies on the impacts of AC characteristics on audit quality in Hong Kong has remained very limited. The details of prior studies pertaining to corporate governance and audit quality in Hong Kong have been discussed in Section 1.2. Furthermore, no extant studies have explored the factors that influence EAs' trust in ACMs and the ramifications of this trust on their interactions and audit quality. Against this backdrop, the current study seeks to fill the knowledge gaps in these identified areas.

This study examines the role of ACMs on audit quality rather than financial reporting quality. Biddle et al. (2009, p.113) defined financial reporting quality as "the precision with which financial reporting conveys information about the firm's operations, in particular its expected cash flows, that inform equity investors". The quality is the accuracy of information contained in financial reports before the external audits. However, audit quality is defined as "meeting investors' needs for independent and reliable audits and robust audit committee communications on financial statements, disclosures, internal control, and going concern warnings" (PCAOB, 2013, p.1). Audit quality is concerned more about the appropriateness of an external audit to improve the quality of financial information.

Gaynor et al. (2016) stated that financial reporting quality captures the extent to which the financial statements reflect the firm's underlying economic condition but audit quality measures the quality of assurance that the external auditors (EAs) obtained sufficient appropriate evidence that the financial statements faithfully reflect the firm's underlying economics. Thereby, financial reporting quality is the quality of the financial information which is independent of the quality of external audits such as the quality of EAs' input, audit process and EAs' interactions with audit committee members (ACMs) and their oversight effort on the quality of audit work. However, this study aims to examine the oversight role of ACMs in improving the quality of external work, so audit quality rather than financial reporting quality should be used. The definitions of audit quality are further explored in Section 2.4.1.

### 1.1 Justifications for the Study

The failures of the companies such as Enron, Tyco International, Adelphia, Arthur Andersen, WorldCom, China Metal Recycling, Hontex, Shanghai Pharmaceuticals Holdings Co Ltd and Olympus Corporation resulted in losses worth hundred billions of dollars by shareholders, banks, audit firms, suppliers, customers, employees and other stakeholders due to weak monitoring mechanisms (HK Company Law, 2013; Basiruddin, 2012; New York Times, 2002). Effective monitoring mechanisms such as an effective AC may have prevented these financial scandals from occurrence or at least reduce their severity (OECD, 2004; Sarbanes-Oxley Act, 2002). Whilst the occurrence of these financial scandals could be attributed to several reasons, it may also indicate the ineffectiveness of ACMs in the discharge of their oversight role (Krishnan and Visvanthan, 2007; Scott, 2012; Tendeloo and Vanstraelen, 2008; Hoitash, Hoitash and Bedard, 2007).

One way in which the AC could mitigate financial scandal or poor financial reporting is by ensuring the quality of an external audit. For instance, ACMs should effectively assess the soundness of audit strategy and implementation arrangements along with any deviation from the audit plan as agreed with EAs, monitor the judgment and expertise of audit team whilst also evaluating EAs' effectiveness in assessing the quality and transparency of financial reporting by managers (PwC, 2013; HKSA, 2002). More specifically, they would do well to ensure that EAs understand the risks and issues that assume significance to the audit (PwC, 2013; HKSA, 2002) and oversee changes within scope of an external audit, EAs' relationships with managers and any breaches of independence and subsequent mitigating actions (PwC, 2013). Moreover, they should examine the comprehensiveness and clarity of the audit findings, including the views on the robustness of the company's going concern assessment, outcome and disclosure (HKSA, 2002). They should also monitor robustness and appropriateness of the audit firm's internal quality control procedures and examine the efficacy of communications between EAs and managers (PwC, 2013), whilst also responding to EAs about significant issues affecting the financial statements (PwC, 2013).

The failure to perform these oversight roles may lead to low quality audit, thus allowing managers to manipulate financial statements with a view to mislead financial statement users. Therefore, financial scandals may occur (Agoglia, Doupnik and Tsakumis, 2011; Beasley, 1996, Dechow, Sloan and Sweeney, 1996).

This study aims to enhance our understanding of issues about the oversight role of the AC in audit quality. Numerous studies in the past have focused on the effectiveness of the regulations on the AC characteristics in the US (Zalata, Tauringana and Tingbani, 2018; Cohen, Hoitash and Krishnamoorthy, 2014; Munsif, Raghunandan and Dasaratha, 2013; Owens-Jackson, Robinson and Waller Shelton, 2009; DeZoort and Salterio, 2001) and the UK (Chaudhry and Noel, 2017; Alzeban and Sawan, 2015; Basil, 2011; Basiruddin, 2011; Zaman, Hudaib and Haniffa, 2011;

Zaman and Sarens, 2013). However, the characteristics of Hong Kong markets are very different from those of the UK and US. These unique characteristics have been discussed in Sections 1.1.1 to 1.1.4. Therefore, the roles of the AC should be investigated in such a unique market especially after the financial crisis in 2008 because managers are under pressure to manipulate earnings in order to show strong financial performance. Moreover, previous studies have focused on the regulations as governance mechanisms, but continued to ignore the interactions taking place between ACMs and EAs on audit quality. EAs' trust in ACMs may enhance the quality of audit because their trust may enhance their performance by encouraging them to interact with ACMs and limit their opportunistic behaviour in external audits. The next section discusses the unique characteristics of Hong Kong.

#### **1.1.1 Hong Kong Regulatory Framework**

The first unique characteristic of Hong Kong is its regulatory framework. According to Lam (2013), the framework of corporate governance can be categorised as both statutory and nonstatutory requirements. Statutory requirements include Securities and Futures Commission, Companies Ordinance, Securities Ordinance and Takeover Codes. Non-statutory requirements, on the other hand, are the rules specified in the Listing Rules. The requirements of AC characteristics are specified in the Listing Rules. Hence, AC characteristics are not regulated under statutory requirements. Since the Listing Rules have no legal effects on the listed firms, the most severe form of punishment is from public censure or cold-shouldering (Zhou, 2006). Hong Kong listed companies do have the freedom to determine as to whether AC characteristics deviate from the requirements under the Listing Rules. This is not the same as the requirements in the US, which legally requires a listed company to have an AC and meet the required AC characteristics (Sarbanes Oxley Act, 2002). Since the legal requirements of AC characteristics are viscerally different, the findings of the US studies cannot be generalised to Hong Kong.

## **1.1.2 Family Ownership Concentration**

The second unique characteristic is concerned with family members' involvement in a company. In Hong Kong, corporate ownership is very concentrated within the hands of a few family members, unlike the US and other Western countries where the ownership is widely spread (Claessens and Fan, 2002; Fan and Wong, 2002). Mok, Lam and Cheung (1992) opined that family-controlled firms were not uncommon in Hong Kong. Tsui and Stott (2004) reported that the ten most prominent families in Hong Kong controlled approximately 32.1 percent of assets of listed companies in Hong Kong. Correspondingly, Credit Suisse (2011) showed that 62% of the country's firms were family firms. Analogously, Jaggi, Leung and Gul (2009) stated that approximately 50 percent of the listed companies in Hong Kong were controlled by family members through the appointment of family members on the board. Family members in Hong Kong appointed chairpersons or executive directors on the board in order to safeguard their personal interests in the listed companies. If family board members are executive members in a firm, control will be dominated, thereby weakening the ability of companies to make independent decisions (Jaggi and Leung, 2007). Jaggi and Leung (2007) examined whether voluntary establishment of an AC in Hong Kong from 1999 to 2000 can effectively reduce earnings management. They found that the presence of family members on boards did reduce the effectiveness of ACs. In addition, they observed that the effectiveness of independent non-executive directors on an AC in lowering discretionary accruals was reduced for family firms in Hong Kong.

As mentioned before, since the ownership structure in Hong Kong is very different from those in the US and Europe, the findings in these countries may not be generalised to Hong Kong. If ownership is concentrated in the hands of a few family members, they may misuse their power to appoint executive directors on the boards. The independence of an AC may be impaired because the reappointment of ACMs is predicated on the personal relationships with family members who appoint them on the board. For this reason, they are less likely to oppose the family members (Jaggi and Leung, 2007).

## **1.1.3** Chinese Culture and Philosophy

The third unique characteristic of Hong Kong relates to directors and EAs. Chinese, American and European culture are very different, so it is only natural that their thoughts and actions may differ from those of American and European. For instance, many Chinese and Hong Kong people are Confucians who negate the value of individual independence. Instead, they emphasise group recognition, mutual interdependence and shared collective interests (Liu and Li N.D.). Confucianism encourages ACMs to focus on the group interests of the members inside companies such

as managers as opposed to the interests of members outside companies like shareholders and government.

Many Chinese and Hong Kong people are also Taoismists. The philosophy of Taoism is contradictory to that of corporate governance. Taoism suggested that humans should not use rules and regulations to control behaviour of others because this is temporal and interferes with the nature (Lao, 1998). Nevertheless, corporate governance focuses on strict controls over the behaviour of managers by the oversight of ACMs and EAs. Since the Chinese culture and philosophy focuses on protecting the interests of people inside the company and opposing the actions to oversee managers and EAs, ACMs in Hong Kong may become more passive in monitoring them. Therefore, Hong Kong is a unique place for this study.

#### 1.1.4 Duality of CEO

The fourth unique characteristic influences the independence of a chairperson to monitor a company in Hong Kong. Duality refers to the concept that a person serves as chief executive officer (CEO) and chairperson of a company (Boyd, 1995). In this regard, Malette and Fowler (1992) suggested that the roles of CEO and chairperson must be separated. CEO is responsible for the operations of a company, but chairperson is responsible for monitoring the performance of managers, including the CEO. Therefore, if the roles of CEO and chairperson are combined, the chairperson may be able to monitor his or her own work as a CEO, thereby rendering the monitoring ineffective (Malette and Fowler, 1992). As compared to Europe, Hong Kong has more listed companies which combine the roles of CEO and chairperson. This dual role is also popular in the US. Only 40 percent of large listed companies in the US had separate roles of CEO and chairperson in 2014 (Deloitte, 2014). In the UK, approximately 10 percent of the listed companies served the dual roles of CEO and chairperson (Deloitte, 2011; Kang and Zardkoohi, 2005; Higgs, 2003; Coles, McWilliams and Sen, 2001).

It may be noted that the levels of dual roles of CEO and chairperson in Hong Kong listed companies were between those of the US and UK. According to Gui and Leung (2004), the proportion of dual roles of CEO and chairperson in Hong Kong was 54 percent in 1996. According to Chen, Stouraitis and Wong (2005), it was approximately 52 percent from 1995 to 1998.

In the wake of these differences, the oversight effects of AC on audit quality may differ because the chairperson, who is the CEO, of a company may appoint a related person to be ACMs to oversee the financial statements that are prepared by the subordinates of the CEO. In this case, since the ACMs may not be truly independent, the efficacy of their oversight may be reduced, leading to impaired audit quality.

## 1.2 Motivations for the Study

The distinctiveness of the context explained above provides three main motivations for this study:

Firstly, a review of audit quality literature reveals a paucity of research relating audit quality on various attributes of corporate governance such as AC and board characteristics in such a unique market in Hong Kong. To that end, this is the most comprehensive study that investigates the impacts of AC and board characteristics on audit quality in Hong Kong.

Secondly, this review also reveals a scarcity of research relating to AC characteristics and audit quality estimated as discretionary accruals in the aftermath of the financial crisis of 2008 in Hong Kong. For instance, one stream of the research examines the relationships between corporate governance and firm performance in Hong Kong. Cheng, Lui and Shum (2015) investigated the effects of corporate governance mechanisms on the share performance of 976 companies listed on the Hong Kong Stock Exchange during the financial crisis from 2008 to 2009. Market returns were regressed on duality of CEO and chairman board size, independence of chairman, board independence, AC independence as well as proportion of shares held by independent directors on the AC. Using ordinary least square regression (OLS), the authors observed that firms which had a higher proportion of independent directors and greater concentration of ownership had a lower share performance and reduced price volatility during the financial crisis. Similarly, Chan et al. (2011) provided a more comprehensive study on AC characteristics. They examined

the effects of AC characteristics on firm performance in 2006. AC characteristics were measured as ACMs' financial expertise, number of meetings, independence, tenure, directorships and remuneration. Using OLS, they found that average AC remuneration and number of AC meetings negatively related to Tobin's Q.

In a study that examined the relationships between changes in the quality of corporate governance practices and subsequent market valuation among large listed companies in Hong Kong from 2002 to 2005, Cheung, Connelly and Limpaphayom (2011) regressed market valuation measured as change in Tobin's O and change in market-to-book ratio on corporate governance index which captured rights of shareholders, equitable treatment of shareholders, role of stakeholders, disclosure and transparency and board responsibilities. Using fixed effect panel data regression with firm clustering, they noted that firms which exhibited improvements in the quality of corporate governance displayed a subsequent increase in market valuation. In a study that investigated the effects of the corporate governance on firm performance between founding family firms and non-founding family firms in Hong Kong, and the performance inside founding family firms from 2008 to 2012, Lee and Barnes (2017) regressed firm performance measured as Tobin's Q, return on assets and return on equity on board size, board independence and number of family members on the board. Using two stage regression, they noted that board size and independence were positively associated with return on assets.

Another stream of research examined the effects of corporate governance on earnings management in Hong Kong. For example, Jaggi and Leung (2007) examined whether the establishment of ACs by Hong Kong firms would constrain earnings management, especially in firms with family-dominated corporate boards from 1999 to 2000. Earnings management was measured as discretionary accruals estimated by modified Jones Model and performance-adjusted current discretionary accruals. Discretionary accruals were regressed on board size, board independence, shareholdings of CEO, non-executive directors and presence of the AC. Using simultaneous regression models and three-stage regression, they observed that overall ACs played a significant role in constraining earnings management even in the business environment of high ownership concentration. The effectiveness of ACs was, however, reduced when family members were present on corporate boards, especially when family members dominated the corporate board.

In a study that investigated the relationships between earnings management in Chinese firms listed in Hong Kong and the presence of government officials on the AC from 2004 to 2008, Lin, Hutchinson and Percy (2015) regressed earnings management measured as the discretionary accruals estimated by modified Jones model and Butler, Leone and Willenborg (2004) on AC characteristics which evaluated the effects of government officials on the AC, AC independence, AC accounting, financial and industry experience. Using random effects generalised least square, they observed a positive association between AC independence, experience and earnings management during the presence of government officials on the AC. In a study that investigated the use of discretionary current accruals by firms that make seasoned equity offers from 1993 to

2000, Ching, Firth and Rui (2006) regressed discretionary accruals on board independence, board size, family control and indicator for seasoned equity offering (SEO). They found that family-owned firms are more likely to use positive discretionary accruals before making an SEO. Independent directors and outside block shareholders constrain earnings management in familycontrolled firms. SEO firms with a larger board size were found to have a higher degree of earnings management around SEOs.

Prior studies in Hong Kong, as stated above, reveal that the effects of AC characteristics on audit quality measured as the level of earnings management have been under-researched after the financial crisis in 2008 and the scope of AC characteristics is very limited, which is why there is a strong incentive to investigate the effects of these characteristics on audit quality. Hence, this study used recent data available from 2010 to 2015. The summary of the studies above can be found in Appendix 1.

Thirdly, review of auditing and trust literature does not show any research relating EAs' trust in ACMs to the efficacy of their interactions and audit quality. There is also no research investigating what factors influence EAs' trust in ACMs. It is important to explore these issues because their trust in ACMs may affect their interactions with ACMs, which may impact the effectiveness and efficiency of the audit processes. Therefore, there is strong incentive to explore their trust, interactions and audit quality. This research is also unique in that it brings in the results from other fields such as psychology and sociology to auditing.

#### **1.3 Research Questions**

This study seeks to investigate the role of AC characteristics and EAs' trust in ACMs on audit quality. Notably, this study asked four research questions to address this issue.

1) What are the impacts of AC characteristics on audit quality in Hong Kong?

2) What factors influence EAs' trust in ACMs in Hong Kong?

3) Does EAs' trust have positive effects on their interactions with ACMs in Hong Kong?

4) How does EAs' trust in ACMs impact their interactions and audit quality in Hong Kong?

#### **1.4 Contributions to Existing Knowledge**

This research provides some novel contributions to the literature on AC and audit quality. The contributions to extant literature are summarised as follows:

There is no published research that investigates the effects of EAs' trust in ACMs on their interactions and audit quality. In this regard, this study makes a significant contribution towards understanding their interactions with ACMs. This is the first research investigating the factors that influence their trust in ACMs using thematic analysis. Although a few previous studies (Rennie, Kopp and Lemon, 2010; Shaub, 1996; Shaub and Lawrence, 1996) have investigated what factors influenced EAs' trust in managers or clients' firms, these factors are likely to be different when they are explored in the AC level. This is also the first research that examines the impacts of effective AC characteristics on audit quality measured as discretionary accruals using recent data from 2010 to 2015. In the context of Hong Kong, discretionary accruals are more appropriate to be used as a proxy for audit quality because only a small proportion of sample firms contained in the Hang Seng Composite Index have restatements of financial restatements, modified or adverse audit opinion, so they are not appropriate to proxy for audit quality. The appointment of Big 4 auditors is used as robustness checks rather than the dependent variables in the main archival modelling study because a small proportion of sample firms appoint non-Big 4 auditors. Audit fees are also used as robustness checks only because audit fees contain risk premium and brand name premium, so high audit fees do not truly reflect the quality of external audit work. Thereby, discretionary accruals should be used to reflect the audit quality in the archival modelling studies.

The scope of this study (1,714 firm-year observations from six years) makes a valuable addition to the current body of literature by providing some recent evidence on the effects of ACMs on monitoring audit quality where prior research findings were either inconclusive or very limited in Hong Kong. This study is very comprehensive in its scope not only in the selection of AC characteristics, but also in controlling for the effects of board characteristics. The selection of comprehensive governance variables facilitates investigation into the relationships between corporate governance and audit quality. Meanwhile the current study is also the first one to examine the effects of AC age and board age on audit quality in Hong Kong and leverage board members' cumulative equity position as board members' ownerships. Prior studies only considered the proportion of the ordinary shares held by board members. However, having the underlying shares covered by share opinions or convertible bond may intervene with board members' independent judgment of monitoring earnings management in Hong Kong.

Finally, this is also the first study to utilise probit panel data regression with robust standard errors to gauge whether the discretionary accruals are higher than the sample median in Hong Kong. The discretionary accruals that are higher than the median of the sample firms may be more effective in indicating low audit quality or the presence of earnings management.

# **1.5 Methodology**

In order to address the research questions stated in Section 1.3, the researcher used agency theory, stakeholder theory and social interdependence theory in order to provide the main theoretical underpinnings for this study. This research has been divided into two segments: archival modelling study and questionnaire survey study. The quantitative method is used in archival modelling study as discussed in Chapter 4. Both quantitative and qualitative methods are used in the questionnaire survey study as discussed in Chapter 8. This section discusses the distinctions between them and why they are appropriate in this study.

"Quantitative methods are described as entailing the collection of numerical data and as exhibiting a view of the relationship between theory and research as deductive, a predilection for a natural science approach and as having an objectivist conception of social reality" (Bryman and Bell, 2007, p.154). Quantitative methods are used by positivists using deductive approach (Bryman and Bell, 2007). Smith et al. (2012) stated that positivists believe that only phenomena that can be observed or measured can be regarded as knowledge. They suggested that the social world exists independently and its properties should be examined by objective methods. It assumes that the reality exists independent of the research and there is only single truth. Easterby-Smith et al. (2012) suggested that the single truth can be found out by objective or scientific methods.

Creswell (2009) suggested that positivists are concerned with the facts and identifying causes that affect outcomes rather than impressions of human subjects. The purpose of positivistic research is to use a highly structured methodology to make a generalisation. Saunders et al. (2009) stated that the focus of positivistic research is on quantifiable observations that allow researchers to use statistical analysis. Scotland (2012) stated that deductive approach is used by positivists. Correlation and experimentation are utilised to reduce complex interactions of variables. Positivistic research often uses empirical testing, controlled variables and random sampling. It primarily uses mathematical and quantitative methods.

Scotland (2012) suggests that the result of positivistic research is considered good if the results

that occur due to the independent variable can be generalised to the population and different research can arrive at the same result with the same data in the same way. In addition, research should be objective and robust to the refutation of empirical study.

However, the quantitative method fails to distinguish people and social instituions from 'the world of nature' (Bryman and Bell, 2007). It is assumed that the principles of the scientific method can and should be applied to all phenomena. This ignores the differences between the social and natural world. For example, it ignores that the fact that people interpret the world around them, whereas this capacity for self-reflection cannot be found among the objects of the natural sciences (Bryman and Bell, 2007).

Furthermore, the analysis of relationships between variables creates a static view of social life that is independent of people's lives. Studies that aim to bring out the relationships between variables omit the process of interpretation or definition that goes on in human groups. This implies that researchers do not know how what appears to be a relationship between two or more variables has been produced by the people to whom it applies (Bryman and Bell, 2007).

In this study, the researcher uses the quantitative research in the archival modelling study to investigate the relationships between the AC characteristics and audit quality. The questionnaire survey study is divided into two parts. Part One of the questionnsire survey also uses the quantitative method to analyse the responses of the closed-ended questions in order to examine the re-

lationships between the levels of EAs' trust in ACMs and the perception of the quality of their interactions. This is discussed in Section 8.7. The quantitative research is appropriate for the archival modelling study, because it is positivistic and deductive research that uses statistical analysis to identify the correlations and patterns between variables for generalisation rather than the participants' interpretations about their interactions with the world. However, it does not answer the questions why and how their trust influences the perception of the quality of their interactions. Therefore, Part Two of the questionnaire survey uses the qualitative research method to analyse the responses of the open-ended questions as discussed in Section 8.8.

Qualitative research is a research method that usually emphasises words rather than quantification in collection and analysis of data. This research method can be used by interpretive research (Bryman and Bell, 2007). It rejects the notion that humans can be analysed in a laboratory as if objects were analysed with the laws of natural science. They argue that a social world is too complex to make a generalisation. Since interpretivists do not reduce complexity of social phenomena, data collection is less artificial (Easterby-Smith et al., 2012). Crewell (2009) states that individuals are social actors and researchers should understand phenomena from the perspective of individuals, so it is not possible to separate people from the social contexts they belong to (Collis and Hussey, 2009).

Edge and Richards (1998) suggest that interpretivists use their beliefs when they decide how to research and how to interpret their collected data. They bring their own interests and values to

the research and have to understand the differences between humans in the role as social actors (Easterby-Smith et al., 2012).

However, qualitative research is criticised to be too subjective because qualitative findings rely too much on the researcher's unsystematic views about what is significant (Bryman and Bell, 2007). It is also difficult to generalise the findings of qualitative research because researach is usually conducted with a small number of individuals, so it is impossible to know how the findings can be generalised to other settings (Bryman and Bell, 2007). It is also difficult to replicate the results because it is usually unstructured and relies on the qualitative researcher's ingenuity and there are hardly any standard procedures to be followed (Bryman and Bell, 2007).

Qualitative research is used to analyse the responses of open-ended questions contained in the the questionnaire survey study. This part of the questionnaire survey study is interpretive and inductive research. The researcher wants to understand the phenomena from EAs' perspectives, so it is not possible to separate the EAs from the social contexts they belong to. This method is appropriate because it enables the researcher to explore the effects of trust in the audit processes and EAs' views on specific issues rather than use statistical method to identify the correlation and patterns between variables for generalisation.

In the archival modelling study, a sample of companies contained in Hong Kong Hang Seng Composite Index was selected and their annual reports were used as the source for data collection. Notably, these annual reports were obtained from the companies' websites. The AC, financial and board data were collected by hand from financial statements. Fixed effect panel data regression with robust standard errors was primarily used so as to examine these relationships. As mentioned before, data were collected from 2010 to 2015. The archival modelling study answers Research Question 1.

In the questionnaire survey study, primary data were collected using semi-structured questionnaire survey. OLS with robust standard errors and independent t-tests were used to analyse the responses to closed-ended questions in order to better understand the relationships between the levels of trust and perception of the quality of their interactions with ACMs. Further, thematic analysis was used to evaluate the responses to open-ended questions so as to understand the factors that influence their trust in ACMs and how their trust improves the effectiveness of their interactions and in effect, audit quality. The questionnaire survey study answers Research Questions 2 to 4. Figure 1 summarises the research methodologies of this thesis.

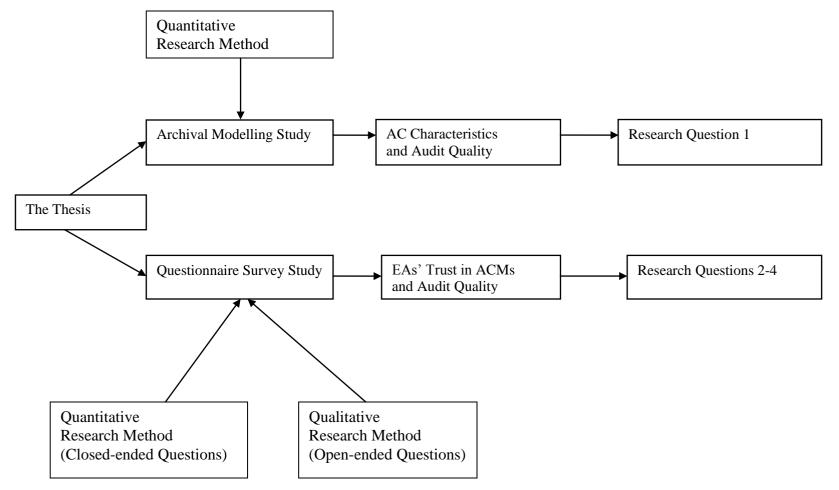


Figure 1: Research Methodologies

# **1.6 Structure of the Thesis**

This chapter discussed the background and rationale for this study, elucidated the motivation for the study and specified the research questions. The contributions made by this study have also been highlighted.

The remainder of this study has been organised as follows: Chapter 2 provides the background and theoretical framework to support the arguments that have been made in this study. The most common theoretical frameworks, such as agency theory and stakeholder theory, have been used to explain the linkage between AC characteristics and audit quality. Social interdependence theory has been used to provide a basis for the argument made in the study. This is because since ACMs and EAs have common goals to ensure high audit quality, they may have positive interactions, which may then facilitate an improvement in the performance of their monitoring audit quality. Once this is established, it provides a general understanding of the nature of earnings management and managers' motivations to engage in it. This chapter then discusses various aspects of audit quality. High audit quality is one of the approaches that is undertaken to reduce earnings management. This chapter also reviews the developments of corporate governance and AC in Hong Kong in order to understand the rights and responsibilities of the board of directors and ACMs to monitor audit quality. Meanwhile Chapters 3 to 6 relate to the archival modelling study. Chapter 3 reviews prior studies on the association between AC characteristics and audit quality, thereby providing a critical and comprehensive review of the various attributes of ACs along with their expected effects on audit quality. The review concludes with seven hypotheses. Chapter 4 outlines the methodological methods of the archival modelling study, identifies the data sources and describes the sample selection process as well as data collection procedures. It also presents analytical procedures and definition and measurement of variables, whilst justifying the choices of analytical methods. Chapter 5 presents and discusses the research results of the archival modelling study. Descriptive statistics are presented, followed by the presentation of the findings of various tests that examine the violation of assumptions and the tested model. The inferences are drawn from tests of the hypotheses. Chapter 6 compares the findings obtained in Chapter 5 to previous research findings so that the researcher could infer the meanings of the findings and then discuss their implications on audit quality in Hong Kong.

Chapters 7 to 10 relate to the questionnaire survey study. Chapter 7 reviews the prior studies on the factors that may influence the levels of trust and the impacts of actors' trust on their interactions and performance. This provides a critical and comprehensive review of trust and its potential impacts on interactions and audit quality. The review concludes with as many as four propositions. In addition to outlining the methodological methods of the questionnaire survey study, Chapter 8 discusses the data collection procedure of questionnaire, its administration, selection of participants and research instrument. Chapter 9 presents and discusses the findings of the archival modelling study. Descriptive statistics are presented, followed by the presentation of the results of OLS with robust standard errors, independent-t test and thematic analysis. Chapter 10 compares the findings obtained in Chapter 9 to prior research findings that allow the researcher to infer the meanings of his findings and then discuss their implications of EAs' trust on ACMs on audit quality in Hong Kong.

Chapter 11 synthesises the results of the archvial modelling and questionnaire survey studies so as to facilitate an understanding of how the archival modelling and questionnaire survey studies are connected as well as the implications of this research to various audiences.

Chapter 12 presents a summary of this study and draws conclusions. This chapter also highlights the study's potential limitations and avenues for future research.

# CHAPTER 2 BACKGROUND AND THEORETICAL FRAMEWORK

# **2.1 Introduction**

Chapter 1 provided the introduction and justifications for the study. Chapter 2 presents relevant background and theoretical framework for the archival modelling and questionnaire survey studies. Firstly, this chapter discusses the agency and stakeholder theories to support the viewpoint that the presence of an effective AC is imperative to protect the stakeholders' interest. Social interdependence theory is reviewed to explore the factors that may influence EAs' trust in ACMs and how this trust affects their interactions. The developments of Hong Kong corporate government and AC are presented so that the researcher can understand the rights and responsibilities of ACMs in performing their oversight role. Thereafter, this chapter discusses various aspects of earnings management and audit quality in order to contend that audit quality is indeed important to constrain earnings management.

# **2.2 Theoretical Framework**

This section discusses three theories relating to the current study. The first two theories, namely, agency theory and stakeholder theory, underpinned the discourse on corporate governance in this thesis, and elucidated the important role of an AC in overseeing audit quality to protect stakeholders' interest. It is these two theories that provide the requisite support for the archvial model-

ling study. The last theory, social interdependence theory, can be used to explain the factors that may influence EAs' trust in ACMs and how this trust influences their interactions in external audits. This theory provides support for the questionnaire survey study.

## 2.2.1 Agency Theory

Agency theory is used extensively in the context of finance and corporate governance literature (Li, Li and Minor, 2016; Krakel and Muller, 2015; Ghosh and Sun, 2014; Jiraporn and Chintrakarn, 2013; Liao and Hsu, 2013; Fung, Jo and Tsai, 2009; Jensen and Meckling, 1976). In particular, this theory helps explain the underlying problem between shareholders and managers as well as the reason why shareholders cannot oversee audit quality on their own but tend to rely on the AC.

Jensen and Meckling (1976) stated that in a contract, one person (the principal) engages another person (the agent) to provide services by delegating the authorities to the agent. Similarly, Friedman (1970) explained that under agency relationship, shareholders are actually the owners (the principals) of the company, so fiduciary duty requires agents (managers) to act for the bene-fits of beneficiaries (principals) so as to safeguard their property (capitals provided). Managers should only maximise the wealth of their shareholders. However, the managers may not act in the best interest of the shareholders if they want to maximise their own benefits (Buchholtz and Ribbens, 1994; Berle and Means, 1932; Jensen and Meckling, 1976; Jensen, 1986; Pratt and Zeckhauser, 1985).

Agency problem occurs between managers and shareholders due to the separation of management from ownership (Jensen, 1986; Berle and Means, 1932). As principles, shareholders do not participate in day-to-day operation of a company since shareholders are not expected to assume the responsibility of managing a firm. As a result, the responsibility for operation is placed in the hands of managers (OECD, 2004; Jensen and Meckling, 1976; Berle and Means, 1932). However, the objectives of the managers and shareholders are incompatible. Managers want to maximise their own wealth such as bonus and performance, but shareholders want to maximise their own benefits such as high share prices and accurate information of financial statements (Jensen and Meckling, 1976).

Shapiro (2005) suggested that asymmetric information exacerbates the problem in the relationship between the principal and agent. Managers act as agents for shareholders to manage a firm and possess more information than shareholders due to their involvement (unlike shareholders) in the day-to-day operations of companies. This information asymmetry leads to two problems: moral hazard and adverse selection.

Moral hazard refers to a situation wherein agents conceal their actions which may be detrimental to their principals when the agents are motivated to pursue their own interests (Holmstrom, 1997; Eisenhardt, 1985; Jensen, 1986). Although these agents should presumably act in the best interests of their principals, in reality, they often act for their own benefits at the expense of their

principals. Scott (2012) opined that moral hazard occurs when the one can observe his or her own actions in fulfilment of a transaction, but another cannot. He stated that shareholders do not possess information about managers' efforts that are devoted to managing a firm because efforts are unobservable; as a result, managers may reduce their efforts. As an indicator of managers' performance, earnings may be used indirectly to measure the managers' efforts. Therefore, without monitoring, managers may engage in earnings management to maximise their private gains by inflating earnings in order to avail more bonuses and enhancing their performance at expenses of shareholders.

On the other hand, adverse selection is more concerned with the hidden information provided to the principals. In this regard, Scott (2012) suggested that adverse selection occurs when one possesses more information than another. For example, managers may camouflage poor earnings by manipulating financial statements, but shareholders do not have information about it. The absence of monitoring makes it difficult to find that financial statements are materially misstated by managers.

Consistent with agency theory, prior research agrees that managers pursue their own benefits rather than shareholders' benefits because their goals are incompatible. For example, in a merger and acquisition, agency problem may arise, because the acquirer has less information about the target company as compared to its managers (Krakel and Muller 2015; Datar, Frankel and Wolfson, 2001; Verrecchia, 1983; Brealey, Leland and Pyle, 1977). For instance, in a study investigating agency problem and merger and diversification. Amihud and Lev (1981) concluded that managers engage in unrelated mergers and diversification in order to reduce employment risk unless they are monitored by large block shareholders. Correspondingly, Datar, Frankel and Wolfson (2001) found that the acquirer designed the consideration to be based on future performance of the targets if they are ridden with high uncertainties due to agency problem, because it cannot observe the manger's efforts in improving firm performance (Datar, Frankel and Wolfson, 2001) both before and after the merger of acquisition. This indicates that the acquirer is sensitive to information asymmetries caused by agency problem. Analogously, Fung, Jo and Tsai (2009) noted that firms with less managerial equity ownership and no long-term incentive plans are more likely to pursue value-destroying market-driven acquisition because managers tend to pursue short-term self-interest. In a study that aimed to examine the synergies of merger target and agency cost, Krakel and Muller (2015) observed that the CEO systematically recommended targets with low synergies even when targets with high synergies are available in order to obtain high-powered incentives and therefore, a high personal income during the merger-management stage. Cheng et al. (2016) made a poignant observation that firms that have the outside block shareholders with a greater tendency to monitor managers such as hedging fund elicit higher takeover gains.

Moreover, managers may over-invest in projects when they have excess cash, but shareholders do not have information about it. In a study that investigated the relationships between the levels of free cash flow and investment, Chen, Sun and Xu (2016) observed that managers engaged in

over-investment if they had high levels of free cash flow. Stulz (1990) noted that firms with free cash flows had a strong incentive to invest in negative NPV project for their own benefits as opposed to shareholders' interests. Similarly, Richardson (2006) examined the effects of free cash flow on over-investment and noted that over-investment was concentrated in firms that had the highest levels of free cash flow. Jiraporn and Chintrakarn (2013) noted that if managers have access to excessive power, they may under-invest in areas that may actually enhance firm value. Li, Li and Minor (2016) meanwhile demonstrated that CEO power is negatively correlated with a firm's choice to engage in corporate social responsibility (CSR) activities in the firm, but CSR activities enhance firm value, as mentioned by their study.

Dividend payout may serve as a mechanism to reduce cash flow that exists under the control of managers, thereby alleviating the agency problem (Chang, Kang and Li, 2016; Ghosh and Sun, 2014). Chang, Kang and Li (2016) observed that firms with large institutional ownership are more likely to use dividend payouts to reduce high agency conflicts. Ghosh and Sun (2014) concurred that lower information asymmetry leads to lower agency conflicts, thus reducing the cost of capital and increasing the rate of growth. They also observed that the distribution of excess dividend to shareholders was positively associated with externally financed growth. Lang (1995) noted that managers tend to retain the proceeds from sales of assets in companies rather than distributing them to shareholders or debt-holders as dividends or payments to debt-holders. Managers were found to retain the proceeds to reduce their employment risk, but did not safeguard the interest of shareholders or debt-holders.

Firms may incur agency costs to reduce the agency problem. They are recognised as the cost of bonding, cost of monitoring and cost of residual loss (Jensen and Meckling, 1976). The cost of residual loss is denoted by the total agency cost when bonding and monitoring activities are both prohibited and ineffective. The cost of bonding is the cost to align agents' interest with principals' interest and relates to the compensation for the agent. One of the methods to align their interests is to allow managers to have shareholdings in a company. By doing so, both managers and shareholders become company owners, as a result of which their interests are aligned. Prior studies agree that cost of bonding may reduce the agency problem if managers' interests are aligned with shareholders' rights. In a study relating to takeover bids, Buchholtz and Ribbens (1994) noted that CEO who had shareholdings may be less likely to resist takeover bids which were beneficial to shareholders. Agrawal and Mandelker (1985) demonstrated that managers' shareholdings encouraged them to make investment decisions aligned with the interest of shareholders. Other studies (Liu, Hsueh and Wu, 2017; Gaur, Bathula and Singh, 2015) found that managers' shareholdings in a company may improve its performance. As an implication, since their interests are aligned, managers may act for the benefits of shareholders.

The cost of monitoring refers to the cost of hiring other agents such as EAs and ACMs to monitor the agents (managers) to act in the best interest of the principals (shareholders). Prior studies also concur that the cost of monitoring assumes importance in reducing the agency problem. For instance, Kosnik (1987) supported the view by showing that if board is ineffective in monitoring managers' performance, managers may repurchase shares at the price above market price. The expensive repurchase of shares is detrimental for the shareholders because it will consolidate managers' power of control at the expense of shareholders. Other studies supported the view that if ACs are effective in monitoring managers, managers are less likely to manage earnings for their own personal gain (Liao and Hsu, 2013; Carcello, Hermanson and Ye, 2011; Sharma and Sharma, 2011; Dimitropoulos and Asteriou, 2010; Duchin Matsusaka and Ozbas, 2010; Owens-Jackson, Robinson and Shelton 2009).

The agency theory relates to the main themes of this thesis. Since shareholders neither participate in the day-to-day operation of a company nor have the rights to monitor managers, they may not possess adequate information about managers' performance and their actions, thereby resulting in the problem of information asymmetries. Consequentially, managers may take advantage of this lacuna to manipulate financial statements for their own benefits. In turn, EAs may dilute their efforts in external audit, because they may want to minimise the resources used to earn the audit fees that have already been agreed upon. Therefore, the agency theory supports the views that the AC should exist to monitor managers as well as EAs to ensure high quality financial statements and audits.

Nevertheless, agency theory is not impervious to criticisms. For example, it argues that managers should only maximise the wealth of shareholders. To that end, Quinn and Jones (1995) posited that an efficient market has been considered to be the best way for allocating social resources.

The benefits of all stakeholders will be enhanced if the market is efficient and managers only maximise the wealth of shareholders. However, Cooper (1970) stated that the assumption of efficient market is not realistic. If the assumption is relaxed, the conclusion that the benefits of all stakeholders and society will be enhanced is invalid.

Agency theory has also been criticised due to the problem of ownership. It assumes that shareholders own a firm, so managers should maximise their wealth. However, a firm is nexus of contract, which implies that one can own a mere nexus including shareholders (Bosse and Phillips 2016). Fama (1980) stated that owners of capital are the owners of production factors but not a firm. Correspondingly, D'Ors (1979) argued that shareholders cannot be company owners because they are uncommitted and can always leave the firm by selling their shares. The application of fiduciary duty under agency theory is flawed. Marens and Wicks (1999) suggested that fiduciary duty is not applied to a person; instead, it aims to protect property provided by a principal. Therefore, as a fiduciary, directors' relationship is not with shareholders personally but with their investment, including stakeholder's investment such as labour and effort.

Freeman and Evan (1990) argued that the money used to protect shareholders is earned from the profit generated using stakeholders' capital, including money, labour, expertise and time. Therefore, if only the interests of shareholders are protected, the cost of protection could potentially be exported to other stakeholders in the society. As a result, they may bear the cost of companies' actions. Danielson and Press (2006) and Jensen (2005) opined that agency theory ignores the long-term survival of a firm. If firms were not unable to gain the supports of their employees and customers by serving their interest, the firms would not be able to survive.

In summary, agency theory supports the view that an effective AC should be established to oversee financial reporting and audit quality. The AC should have certain characteristics that enable ACMs to function effectively and allow for the monitoring of the audit quality. For instance, a large AC may have more expertise or manpower to monitor audit processes and financial reporting quality (Yasser and Al Mamun, 2016; Rickling, 2014; Nelson and Devi, 2013; Baxter and Cotter, 2009; Lin, Li and Yang, 2006; Ho and Wong, 2001). An independent AC may oversee managers and EAs without being influenced by them (Liao and Hsu, 2013; Carcello, Hermanson and Ye, 2011; Dimitropoulos and Asteriou, 2010; Duchin, Matsusaka and Ozbas, 2010; Sharma and Sharma, 2011). ACMs with great expertise may understand high quality audit processes and earnings management strategy, so that EAs cannot provide low quality audit and managers may find it more difficult to engage in earnings management (Rickling, 2014; Dhaliwal et al., 2010; Naiker and Sharma, 2009).

ACMs with long tenure may gain knowledge of operations in a specific company, so they may understand the high risk areas in a company and be familiar with the integrity of managers (Chan, Liu and Sun, 2013; Aldamen et al., 2012; Ghosh et al., 2010; Yang and Krishnan, 2005). A diligent AC may spend more time discussing important issues to enhance the quality of an audit such as the appropriate relationships between EAs and managers (Rickling, 2014; Suarez et al., 2013; Hong Kong Society of Accountants, 2002; The UK Corporate Governance Code, 2012; Sharma and Iselin, 2012). ACMs with many outside directorships may enable them to derive greater oversight experience in other companies so that they will know how to improve a company's operations (Rickling, 2014; Alkdai and Hanefah, 2012; Kang and Kim, 2011; Ahn, Piraporn and Kim, 2010; Frye and Wang, 2010; Sarkar and Sarkar, 2009). Older ACMs may work more diligently because they have fewer career options and high reputation risk (Dao, Huang and Zhu, 2013; Huang, Green and Lee, 2012; Van der Zahn, Harjinder and Inderpa, 2008). These factors support the viewpoint that effective AC characteristics may improve their oversight quality on audit quality.

## 2.2.2 Stakeholder Theory

Agency theory suggested that an AC is required to protect shareholders' interests. Freeman (1984) extended the protection to stakeholders as well. He proposed a stakeholder theory by stating that a corporation should be regarded as the grouping of stakeholders and the purpose of the existence of a corporation is to manage their interests, needs and viewpoints (HKICPA, 2013a; Venkataraman 2002; Donaldson and Preston 1995). Stakeholder theory can bring in realistic performance indicators and a higher moral standard for a firm (Hill and Jones, 1992), thus making capitalism more equitable (Kaler, 2006). It highlights CSR (Kaler, 2006). Kaler (2006) suggested that managers are required to solve the problem of CSR.

Fontrodona and Sison (2006) claimed that shareholders just have particular rights such as the

rights to receive distribution of profit and asset. Although there are no formal or legal rights of other stakeholders, they should be able to claim the services of a company due to fundamental constituents of distributive justice such as need, ability, effort and mutual agreement that are also applicable to their relationships. Resource-based theorists concurred that firms need stakeholder relationships to obtain most of the resources (Barney and Arikan, 2001; Harrison and St John, 1996) so that it can survive. "Mutually beneficial stakeholder relationships can increase the wealth-creating capacity of a firm" (Post, Preson and Sachs, 2002, p.36) and reduce value-destroying outcomes (Harrison and St. John, 1996; Cornell and Shaprio, 1987; Shane and Spicer, 1983). Meanwhile Drucker (2001) suggested that human capital is one of the most important types of capital in a firm, which is why stakeholders' rights such as those of employees should be protected (Fontrodona and Sison, 2006).

Nevertheless, stakeholder theory fails to answer the questions of "who" these stakeholders are and "how" their interests are managed (Mainardes, Alves and Raposo, 2011; Danielson, Heck and Shaffer, 2008). According to Post et al. (2002) and Philips (2002), stakeholder theory does not provide a practical solution to identify ways of benefiting all parties equally. Freeman (2002) stated that firms should benefit and exact costs from stakeholders, but the theory does not provide a way to assess which stakeholders make greater contribution than others.

Mitchell, Agle and Wood (1997) and Danielson, Heck and Shaffer (2008) suggested that although firms should be made more accountable for stakeholders' long-term benefits in theory, it may lead to maximisation of short-term at expenses of other stakeholders' long-term benefits. Managers always focus on maximising current stakeholders' short-term benefits; consequently, future stakeholders' long-term interest is ignored because current stakeholders' needs are more urgent.

Since this study examines the role of AC characteristics and EAs' trust in ACMs in enhancing audit quality so as to protect stakeholders' interest in a society, the researcher adopts the view of stakeholder theory that corporate governance should be used to protect stakeholders' interests.

# 2.2.3 Social Interdependence Theory

Agency theory and stakeholder theory suggested that stakeholders cannot directly oversee managers to manage a company on their own, which is why there should be an AC to perform the oversight role. However, the theories remain salient on what factors influence EAs' trust in ACMs and how their trust may improve their interactions. Social interdependence theory provides insights into these issues and states that people have interactions because the cost and reward of an actor is dependent on another actor's actions in a relationship.

Deutsch (1949) suggested that social independence exists when individuals' achievement of outcomes is influenced by the actions of other people. There are two types of social interdependence. The first type is positive interdependence if the actions of one individual positively influence the achievement of another individual's goal. The second type is negative interdependence if the actions of one individual negatively influence the achievement of another individual's goal. Since trust relates to positive interdependence, only positive interdependence is discussed in this study. If there is positive interdependence, individuals may cooperate because their actions may enable them to achieve own goals. Therefore, their actions become effective. As an implication, their actions increase the probability of attaining a goal. If so, the individuals may demonstrate cooperative behaviour (Bertucci et al., 2016; Choi and Johnson, 2011; Johnson and Johnson, 2015, 2009, 2005; Johnson et al., 1991; Ortiz, Johnson and Johnson, 1996; Lew et al., 1986a, 1986b; Mesch, Johnson and Johnson, 1988; Mesch et al., 1986; Deutsch 1949).

This theory proposes three psychological processes (Johnson and Johnson, 2015, 2009, 2005, 2009, 1981; Johnson 2003; Kramer and Brewer 1984; Deutsch 1949). The first process is substitutability. If there is positive interdependence, one individual may substitute their actions for others' actions (Johnson and Johnson 2015, 1981; Johnson et al., 2010; Johnson 2003; Kramer and Brewer 1984; Deutsch 1949). For instance, Lewis and Franklin (1944) observed that if an actor completes required tasks, that person's action substitutes for one's actions, thereby reducing the tension stemming from interruption. This may then reduce their anxiety so that they can exchange information (Johnson and Johnson, 2015, 2009, 2005; Ryan, 1982; Pittman, 1980) and resources (Bertucci et al., 2016; Johnson and Johnson, 2015, 2009, 1992; Johnson, 1974; Crawford and Haaland, 1972; Laughlin and McGlynn, 1967). They may also render help and assistance to others (Bertucci et al., 2016; Johnson and Johnson, 2015, 2009, 2005, 2003). Actors may be

encouraged to challenge each other's conclusions and reasoning to promote higher quality decision making and greater insight into problems (Johnson and Johnson 2015, 1979, 1995, 1992, 1979).

The second process is formation of positive cathexis, which is concerned with the investment of psychological energy in others as opposed to oneself (Bertucci et al., 2016; Johnson and Johnson, 2015, 2009, 2005, 1981; Johnson 2003; Kramer and Brewer, 1984; Deutsch 1949). The cathexis attached to one's actions may also be extended to another individual. This may be used to explain why one individual trusts another. It presumes that if an organism is to survive, it has to respond positively to events that enhance its well-being and respond negatively to events that reduce its well-being. Therefore, if effective actions are cathected positively, one may like the person who performs the effective actions (Bertucci et al., 2016; Johnson and Johnson, 2015, 2009, 2006). Thus, positive cathexis encourages actors to act in trustworthy ways (Bertucci et al., 2016; Johnson and Johnson 2015, 2009; Johnson 1974; Deutsch, 1962, 1960, 1958; Johnson and Noonan, 1972). Koestner et al. (2002) conducted two experiments and observed a positive relationship between the progress toward achieving goals and positive affect.

The last process is inducibility, which refers to the openness to being influenced and to influencing others (Johnson and Johnson, 2015, 2003, 1981; Kramer and Brewer 1984; Deutsch 1949). If positive interdependence exists and they may have cooperative behaviour, one can easily induce another individual to engage in actions that obtain the goals, or not engage in actions that interfere with the achievement of goals (Johnson and Johnson, 2015, 2006, 1981; Johnson, 2003; Kramer and Brewer, 1984; Deutsch, 1949). Inducibility may encourage actors to contribute their effort (Johnson and Johnson, 2015, 2009; Choi and Johnson, 2011; Stanne, Johnson and Johnson, 1999; Pallak, Cook and Sullivan, 1980; Wicklund and Brehm, 1976) and influence another's efforts to attain common goals (Bertucci et al., 2016; Johnson and Johnson, 2009; Johnson et al., 1985; Crombag, 1966; Raven and Eachus, 1963; Deutsch, 1949b).

When viewed collectively, if actors interdepend on one another to achieve common goal and have positive independence, actors may be motivated to strive for mutual benefit (Bertucci et al., 2016; Johnson and Johnson, 2015, 2009, 1989; Deutsch, 1949b), so they may have more effective interactions, and ultimately improve their operations.

Prior studies support the views that if actors have common goals, they may have positive interactions in accordance with social interdependence theory. In a study that aimed to examine social independence theory in information system development, Pee, Kankanhalli, and Kim (2012) suggested that perceived interdependence in terms of goal, task and reward enhance knowledge sharing between business professionals and external IT consultants during the development of information system. They found that their interdependence facilitates knowledge sharing, thereby leading to better performance. In a study that investigated the effects of trust and dependence on knowledge sharing in the context of information system development, Lee et al. (2015) confirmed that dependence and trust facilitate knowledge sharing. Ghobadi and D'Ambra (2013) used the social interdependence theory to explain high quality knowledge sharing in cross-functional software development teams. They suggested that the interdependence of partners promotes cooperative behaviour, which may facilitate high quality knowledge sharing. They observed that outcome interdependence means interdependence and boundary interdependence - all positively related to cooperation and high quality knowledge sharing.

These findings may be applicably on the relationships between EAs and ACMs in external audits. Since they interdepend on one another to perform high quality audit to reduce the information asymmetries between managers and stakeholders, there is a possibility of positive interdependence since they have common goals. They interdepend on one another, so any factor that helps them achieve their common goals may influence their levels of trust, such as the ACMs' competence, integrity and goodwill. With high levels of trust, they believe that their interactions facilitate the attainment of common goals (high audit quality). They may be willing to spend their time exploring recommendations to improve internal control systems. They may share their experience so that they understand how to improve the financial reporting processes and internal control systems. If EAs expect the ACMs to help them provide high audit quality, they may react positively to ACMs. Since they react positively, they may not engage in actions interfering with high audits quality and become willing to interact with one another. For example, they may willingly contribute their resources such as efforts and expertise in the audit process and share in-

formation so as to obtain a better understanding of client' operation and managers' integrity. These measures, in turn, improve the effectiveness and efficiency of the audit processes.

#### **2.3 Earnings management**

This section discusses the definitions of earnings management and the rationales for managers to do so. It lends credence for the view that if managers remain unmonitored, they may have a strong motivation to engage in earnings management for their personal benefits at the expense of other stakeholders. They may also manage their earnings by reducing the expenditure or investment of a company; real earnings management or manipulate the discretionary accruals; accrual-based earnings management. Section 2.3.1 discusses the definitions of earnings management, whereas 2.3.2 discusses the motivation for managers to engage in earnings management.

## **2.3.1 Definitions of Earnings Management**

This study now turns to the problems of earnings management. Managers can manage reported earnings by using the flexibility of accounting choices (Watts and Zimmerman, 1978). In wake of this flexibility, managers may use different estimations and assumptions to manage reported earnings (Watt and Zimmerman, 1990).

Watt and Zimmerman (1990) did not mention why managers are engaged in earnings management, but Schipper (1989) stated that managers do so for their private gains. Notably, Schipper (1989, pp.92) defined earnings management as "the actions in the sense of purposeful intervention in the external financial reporting processes with the intent for private gain".

The definition of earnings management by Healy and Wahlen (1999) seems more comprehensive. They underscored the fact that managers engage in earnings management for their personal gain and use their discretion to achieve their goals. Healy and Wahlen (1999, p.368) defined earnings management as the process where "managers use judgments in financial reporting and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers". They underlined that the purpose of earnings management is to mislead stakeholders about the economic performance of the company.

Earnings can be managed in two ways: real earnings management and accrual-based earnings management. Roychowdhury (2006) suggested that managers change their decisions using real earnings management to influence the economic reality of their firms, but this method is more costly and may reduce the companies' competitiveness, which is why managers usually do not use this method. On the other hand, Dechow, Sloan and Sweeney (1995) stated that accrual-based earning management entails the use of accruals of earnings without affecting real economic consequences. Therefore, managers more often engage in accrual-based earnings management. High levels of earnings management indicate low levels of audit quality since the external audit is often not effective in detecting the manipulation of earnings. Consequently, earnings are not

transparent and cannot reflect useful and reliable financial information for users to be able to make their economic decisions. Put differently, high levels of earnings management can be considered low audit quality (Gore et al. 2001; Francis, Maydrew and Sparks, 1999; Becker et al. 1998).

#### 2.3.2 Motivations for Earnings Management

Based on the previous section, the research shows that managers engage in earnings management because of their private gains. This section discusses more incentives for earnings management.

The first motivation is their compensation. Managers may manage earnings upward because their bonus is based on the amount of earnings and they want to avoid the violation of debt covenant. They may also manage earnings downward so that they can obtain favourable terms during debt-renegotiation and avoid regulation of government.

Managers' bonus is often based on the amount of earnings, so managers have the incentive to increase bonus by managing earnings. Alternatively, if managers believe that earnings cannot increase significantly in a year, they may plan to smooth the earnings to next year, so that they can earn a bonus and their earnings can significantly increase in the following year. In this regard, Gaver, Gaver and Austin (1995) and Healy (1985) observed that firms in a lower bound of earnings have higher income-increasing discretionary accruals, thereby indicating that managers engaged in income-increasing earnings management. Healy (1985) noted that managers mange

earnings downward when they are unable to meet the earnings target so that their earnings can be reserved to calculate bonus in the next year.

Firms may engage in earnings management to avoid violating debt-covenant. Sweeney (1994) compared earnings accruals of defaulting firms with those of non-defaulting firms. She reported that if the levels of financial indicators of the defaulting firms approached those of covenant restrictions, firms had more income-increasing accruals because managers wanted to avoid the violation of debt-covenant. Similarly, DeFond and Jiambalvo (1994) suggested that abnormal accruals and working capital accruals increased in the year prior to the violation of covenant. Saleh and Ahmed (2005) examined the levels of discretionary accruals in distressed firms that were under debt contract renegotiation after the violation of debt convent. They documented that the firms which underwent debt-renegotiation had a higher income-decreasing discretionary accruals.

Political process and legislation is also known to influence the content of financial statements (Watts, 1977). In order to avoid the cost of ruling, managers may manipulate earnings to show reduced levels of earnings so that they are not prosecuted nor regulated by the government. Presenting evidence to lend credence to this notion, Cahan (1992) found a sample of firms that were under investigation for antitrust from 1970 to 1983. He observed that discretionary accruals of the firms under investigation decreased in the year of investigation, while the discretionary accruals of control firms remained constant. Meanwhile Navissi (1999) consistently demonstrated that firms would use income-decreasing discretionary accruals to avoid regulations, so that firms

may apply for price increases owing to financial hardship.

In summation managers are motivated to engage in earnings management because of management compensation, debt-renegotiation, debt-covenant and political cost. Therefore, if financial statements prepared by managers are not monitored by high quality audit, it is probable that managers may engage in earnings management for their own benefits at the expense of stakeholders. Figure 2 summarises the motivations for earnings management.

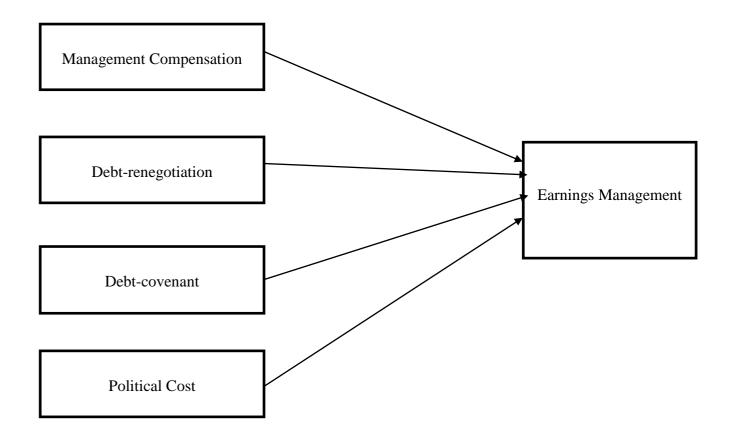


Figure 2: Motivations for Earnings Management

## 2.4 Audit Quality

The other important concept underlined in this thesis is audit quality, which is important to deter earnings management as stated in Sections 2.3. If EAs do not perform high quality audit, or if ACMs fail to effectively monitor the quality of external audit work, EAs may neither perform appropriate audit procedures nor gather sufficient evidence to detect manipulated earnings. Therefore, if audit quality is low, manipulated earnings may not be detected. Consequently, financial statement users may make erroneous economic decisions using the manipulated financial statements. Thus, resources may be misallocated in a society, which results in sub-optimal use of resources. Most importantly, financial statement users may lose their entire capital invested in a company if it goes bankrupt. As a case in point, the collapse of Enron brought significant hardship to many of its stakeholders in the wake of low audit quality. Therefore, audit quality is required to ensure that earnings fairly reflect the financial performance and position of a company (Lee and Barnes 2017; Cheung et al. 2011).

## 2.4.1 Definitions of Audit Quality

The most common definition of audit quality was provided by DeAngelo (1981), who opined that audit quality is "the joint probability that an external auditor will both discover any breach in a client's accounting system and report the breach" (DeAngelo 1981, p.186). This definition focuses on the willingness and competence of EAs to discover the breach in clients' accounting system. While DeAngelo's (1981) definition did emphasise the technical quality of EAs, it ig-

nored the interactions taking place between ACMs and EAs.

According to Sharma et al. (2011), ACMs interact with EAs to discuss issues relating to an external audit, as opposed to operating on their own. International Standards on Auditing recognised the importance of interactions between ACMs and EAs by stating that many of the activities such as those concerning communications (ISA 260 and ISA 265), audit planning, risk and materiality (ISA 300, ISA 315 and ISA 320), reliance on internal audit (ISA 610) and the wording of the audit report (ISA 705 and ISA 706) involve the interactions between ACMs and EAs.

IAASB (2011) concurred that the interactions between EAs and ACMs assume significance for the enhancement of audit quality. IAASB (2011, p.2) defined audit quality as "the assessment of quality of the external auditor, quality of audit process, and communications and interactions between external auditors and audit committee members." The FRC (2008) and the HKICPA (2010a) are congruent with the viewpoint of the IAASB (2011) that interactions between ACMs and EAs are important determinants of audit quality. According to them, one of the elements determining audit quality is the reliability of audit reporting. They suggested that the reliability of audit reporting is predicated on the interactions and communications between ACMs and EAs to discuss issues such as the scope of external audits, the threats to auditor objectivity, the key risks identified (Dongen 2014), judgments made in forming an audit-related opinion (Dongen 2014), the qualitative aspects of a company's accounting and reporting (Dongen 2014) and potential ways of improving the quality of financial reporting (AICPA 2000; BRC 1999). If these issues were not effectively discussed between ACMs and EAs, they may not have sufficient evidence to form reliable opinions within the audit report. Therefore, the financial statement users cannot rely on the conclusion of the audit report.

Since this study focuses on the effects of effective AC characteristics and EAs' trust in ACMs in audit quality, the researcher would adopt the definition of the IAASB for audit quality.

# 2.4.2 Antecedents of Audit Quality

This section discusses the factors affecting audit quality. The FRC (2008) and the HKICPA (2010) suggested five important antecedents of audit quality: culture of the audit firm, skills and personal qualities of audit partners and staff, the effectiveness of the audit process, reliability and use-fulness of the audit reporting and factors beyond the control of EAs.

The FRC (2008) and the HKICPA (2010) stated that the culture within an audit firm improves audit quality because its leadership is appropriate (Francis 2011; Douglas et al., 2001; Otley and Pierce, 1996; Willett and Page, 1996; Windsor and Ashkanasy, 1995; Ponemon, 1992). The top management of an audit firm should create an environment where it is important to achieve high quality and emphasise that serving the public interest assumes significance. Since the top management is concerned with audit quality, the audit staff may endeavour to enhance the quality of their audit work (Svanberg and Ohman, 2013; PCAOB, 2012; HKICPA, 2010; Sweeney et al.,

2010; FRC, 2008). Therefore, audit quality may be improved.

The second factor is the skills and personal qualities of audit partners as well as staff. If the audit partners and staff have the appropriate skills and experience, they may develop a better understanding of clients' business operation and accounting and auditing standards (Knechel et al., 2012; Francis, 2011; HKICPA, 2010; FRC, 2008; Anderson et al., 1994). Audit firms should assign the audit partners and staff who have appropriate skills and experience to a specific audit engagement. In particular, they should recruit staff with appropriate skills and experience. Doing so may render audit procedures more appropriate for the clients and better identify significant risk areas (Yuan, Cheng and Ye, 2016; Knechel, 2012; Francis, 2011; Erickson, 2000; Solomon, Shields and Whittington, 1999; Biggs, Selfridge and Krupka, 1993; Bonner and Lewis, 1990), leading to high audit quality.

Moreover, the effectiveness of the audit process is concerned with the appropriateness of the audit methodology and tools that are applied to an external audit (Knechel, 2013; Francis, 2011; HKICPA, 2010; FRC, 2008). The involvement of partners and managers in an external audit, provision of framework, procedures to obtain sufficient and appropriate audit evidence, effective review of audit work and efficacious audit quality control procedures are all the instances of audit processes (Laitinen and Laitinen, 2015; Knechel, 2013; Francis, 2011; HKICPA, 2010; De-Fond, 2010; FRC, 2008; Anantheraman, 2007; Glover, 2005; Earley, 2002; Anderson, Koonce and Marchant, 1994; Bernardi, 1994). If audit methodology and tools are appropriate and reliable and relevant audit evidence can be gathered, the quality of audit may be high (Laitinen and Laitinen, 2015).

The reliability and usefulness of audit reporting are concerned with the clarity of the audit report as well as the communications between ACMs and EAs (Fakhfakh, 2016; Knechel, 2013; Francis, 2011; HKICPA, 2010; FRC, 2008). If audit reports are written with high clarity, the audit reports will be useful to the users of financial statements (Fakhfakh, 2016; Hay, 1998). If their communications are effective, EAs may not only better identify the scope of the audit, but also provide useful recommendations to improve accounting procedures and internal control systems (Fakhfakh, 2016; Knechel, 2013). Therefore, audit quality may be enhanced.

The last component is the factors that are beyond the control of EAs. In addition to the abovementioned factors, some client-specific factors that cannot be controlled by EAs also significantly influence audit quality (HKICPA, 2010; FRC, 2008). For example, if ACMs are active and professional, they may effectively define the scope of audits with EAs and judge the appropriateness of audit opinion with the audit evidence provided by EAs (Fakhfakh, 2016; FRC, 2008; Zhang, Zhou and Zhou, 2007; Carcello et al., 2006; DeZoort, 1998). Another example is the reporting deadlines that allow the opportunity to perform an audit without undue reliance on the work undertaken just prior to the end of the reporting period (FRC, 2008; Glover et al., 2005). If the reporting deadlines are found to be appropriate for the workload of the external audits, they may have sufficient time to perform appropriate audit procedures and gather sufficient audit evidence without having to rush in order to form an audit opinion (Lee, Mande and Son, 2009; Glover, Prawitt and Wilks, 2005; Jaggi and Tsui, 1999). Therefore, audit quality may be deemed high.

In conclusion, AC characteristics may be regarded as the factors outside EAs' control that influence audit quality due to the fact that they cannot control clients' AC structure. If AC characteristics are effective, ACMs may perform their oversight role in a better manner so as to monitor audit quality. Prior studies supporting this argument have been discussed in Chapter 3. EAs' trust in ACMs may not only influence the effectiveness and efficiency of the audit process, but also the reliability of audit report. The effectiveness and efficiency of audit process may be enhanced because their trust in ACMs may encourage them to discuss audit issues with ACMs, such as audit plan, unpresentable tests, risk assessment and managers' integrity. Developing an understanding of these issues may enhance audit quality. The reliability of audit report may be enhanced because they may seek more information in order to determine the scope of audit and provide more useful recommendations beyond the requirements of the audit standards. Consequentially, the quality of audit may be high. Prior studies supporting the arguments that trust enhances actors' interactions and performance are discussed in Chapter 7. Table 1 highlights the antecedents of audit quality found in the literature.

Table 1: Key Drivers of Audit Quality (FRC 200)
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Drivers	Indicators
The culture with-	The culture within an audit firm enhances audit quality if the leader-
in an audit firm	ship of an audit firm:
	• Creates an environment where achieving high quality is valued,
	invested in and rewarded.
	• Emphasises the importance of "doing the right thing" in the
	public interest and the effect of doing so on the reputation of
	both the firm and individual external auditors
	• Ensures that partners and staff have sufficient time and re-
	sources to deal with difficult issues as they arise.
	• Ensures that financial considerations do not drive actions and
	decisions having a negative effect on audit quality.
	• Promotes the merits of consultation on difficult issues and sup-
	ports partners in the exercise of their personal judgment.
	• Ensures robust systems for client acceptance and continuation.
	• Fosters appraisal and reward systems for partners and staff that

	promote the personal characteristics that are essential to quality
	auditing.
	• Ensures audit quality is monitored within firms and across in-
	ternational networks and appropriate consequential action is
	taken
The skills and	The skills and personal qualities of audit partners and staff enhance
personal qualities	audit quality if:
of audit partners	• Partners and staff understand their clients' business and adhere
and staff	to the principles underlying auditing and ethical standards
	• Partners and staff exhibit professional scepticism in their work
	and are robust in dealing with issues identified during the audit.
	• Staff performing detailed "on-site" audit work has sufficient
	experience and are appropriately supervised by partners and
	managers.
	• Partners and managers provide junior staff with appropriate
	mentoring and on the job training.
	• Adequate training is given to audit personnel in audit, account-
	ing and industry specialist issues.

The effectiveness	The audit process enhances audit quality if:
of the audit pro-	• The audit methodology and tools applied to the audit are well
cess	structured and:
	1. Encourage partners and managers to be actively involved in
	audit planning.
	2. Provide a framework and procedures to obtain sufficiently
	appropriate audit evidence effectively and efficiently
	3. Require appropriate audit documentation.
	4. Provide for compliance with auditing standards without in-
	hibiting the exercise of judgment.
	5. Ensure there is effective review of audit work.
	6. Audit quality control procedures are effective, understood
	and applied.
	• High quality technical support is available when the audit team
	requires it or encounters a situation that it is not familiar with.
	• The objectives of ethical standards are achieved, providing con-
	fidence in the integrity, objectivity and independence of the au-
	ditor.
	• The collection of sufficient audit evidence is not inappropriate-
	ly constrained by financial pressures.

The reliability	The reliability and usefulness of audit reporting enhance audit quali-
and usefulness of	ty if:
audit reporting	• Audit reports are written in a manner that clearly and unambig-
	uously conveys the auditor's opinion on the financial state-
	ments and addresses the needs of users of financial statements
	in the context of applicable law and regulations.
	• Auditors arrive at a proper conclusion with regard to the truth
	and fairness of the financial statements.
	• Communications with the audit committee include discussions
	about:
	1. The scope of the audit.
	2. The threats to auditor objectivity.
	3. The key risks identified and judgments made in reaching
	the audit opinion.
	4. The qualitative aspects of the entity's accounting and re-
	porting and potential ways of improving financial reporting.

Factors beyond	The factors beyond the control of auditors include:
the control of ex-	• An approach to corporate governance within the reporting enti-
ternal auditors	ty that attaches importance to corporate and financial reporting
	as well as to the audit process
	• Audit committees that are active, professional and robust in
	dealing with issues identified during the audit
	• Shareholders that support external auditors, where appropriate,
	thereby increasing the likelihood that directors and manage-
	ment will comply with their obligations in relation to the prepa-
	ration of reliable financial statements.
	• Reporting deadlines that allow the opportunity to carry out an
	audit without undue reliance on work performed before the end
	of the reporting period.
	• Appropriately agreed arrangements for any limitation of liabil-
	ity.
	• An audit regulatory environment that focuses on the drivers of
	audit quality

The thesis now turns to consider the various measurement of audit quality proposed in the literature.

#### 2.4.3 Potential Measures of Audit Quality

Audit quality cannot be directly observed, so proxies have been used to measure audit quality indirectly. An external audit entails three components: input, process and output, which is why the effectiveness and efficiency of an external audit is predicated on these. The input of an external audit is the resource used and EAs' involvement in the audit process. The processes include internal control and audit processes so as to ensure high audit quality. The output of an audit is the accuracy of the audit opinion and the effectiveness and efficiency of an external audit in order to deter earnings management.

The input proxies used in the previous research included audit fees (Ho and Kang, 2013; Zaman, Hudaib and Haniffa, 2011; Boo and Sharma, 2008; Hay, Knechel and Ling, 2008; Griffin, Lont and Sun, 2008), size of audit firm (Ho and Kang, 2013; Al-Thuneibat, Al-Issa and Baker, 2011; Choi, et al., 2010), audit hours (Hackenbrack and Knechel, 1997; O'Keefe, Simunic and Stein, 1994) and auditor industry specialist (Sun and Liu, 2013; Fung, Gul and Krishnan, 2012; Kwong, 2011). The studies using input proxies assume that additional resources allocated to an external audit may enhance audit quality. For instance, auditor choice measures whether the audit firms are Big N auditors. If they indeed are Big N auditors, audit firms are supposed to have more resources. Therefore, they may be able to improve the quality of audit. As another example, if EAs are industry specialists, they may provide greater expertise to perform external audits in a specific industry. Therefore, audit quality should be higher.

However, there are some limitations for input proxies. For example, the information about the input proxies may be difficult to obtain. For example, EAs' education, training, experience and audit hours are not publicly available (Basiruddin, 2011). Second, although sufficient resource is used in an external audit, it cannot guarantee that the resources are used judiciously in the process. If that is the case, audit quality may decrease. Whilst audit fees are high for Big N auditors, it cannot guarantee that high audit fees are an accurate measure of efforts because the expensive fees are also inclusive of a reputational premium (Basiruddin, 2011; Caneghem, 2010). Further, although Big N auditors are famous, it is difficult to ensure that they provide a high quality audit if they are not independent. Although input resources are provided, the process may influence audit quality, so the processes that influence audit quality should also be taken into consideration. In terms of audit processes, extant research has investigated the relationship between material control weaknesses and audit quality. If internal control systems are substantially defective, the information provided by these systems should have a low quality (Altamuro and Beatty, 2010; Ashbaugh-Skaife et al., 2008; Doyle, Ge and McVay, 2007). In contrast, if internal control systems are effective, they should be able to constrain earnings management or fraudulent reporting. Therefore, if input resources are sufficient and internal control systems are effective, it can be inferred that an external audit should have a better outcome.

The output proxies used in prior research included earnings accruals (Shankaraiah and Amiri, 2017; Yasser and Al Mamun, 2016; Ayemere and Elijah, 2015; Baxter and Cotter, 2009); earn-

ings response coefficient (Brown, Preiato and Tarca, 2014), earnings target (Davis, So and Trompeter, 2009; Jacob and Jorgensen, 2007; Kerstein and Rai, 2007), occurrence of qualified opinions and restatement (Bruynseels and Cardinaels, 2014; Munsif, Raghunandan and Dasaratha, 2013; Hennes, Leone and Miller, 2008; Desai et al., 2006) as well as audit-related litigation or financial frauds (Kravet and Shevlin, 2010; Owens-Jackson, Robinson and Shelton, 2009; Palmrose and Scholz, 2004). It is assumed that if the output of an external audit is effective, the quality of audit is high. For example, if earnings accruals are low, audit quality should be high.

Nevertheless, there are some criticisms of output proxies. High audit quality cannot guarantee a low occurrence of restatements and litigation owing to the timing difference between the litigation and external audit. For example, although EAs provide high quality audit in the last period, fraud may occur at the beginning of the current period. Therefore, this does not indicate that the audit quality in the previous period is low because of a timing difference. Additionally, frauds may occur over a period of time by immaterial amount. They may not discover frauds or misstatements although they do provide an effective audit. Furthermore, clients without financial restatements or audit-related litigation do not necessarily suggest that audit quality is high since the occurrence of restatements, misstatements, or litigation indicates that audit quality is extremely low. Figure 3 summarises the measures of audit quality.

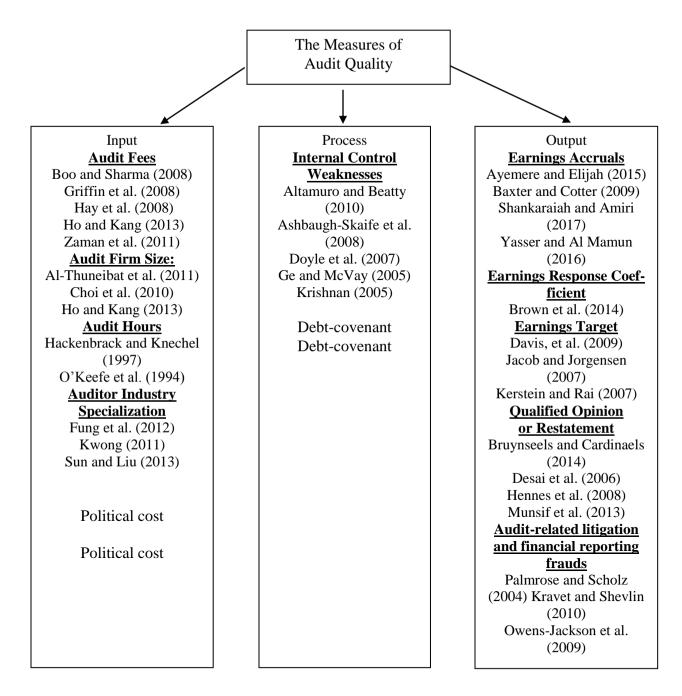


Figure 3: Potential Measures of Audit Quality

In the archival modelling study of the thesis, audit quality is measured by earnings accruals because this measure provides more information about the magnitude of audit quality as a continuous variable rather than a dichotomous variable such as the occurrence of restatements, misstatement, or litigation. Further, more public data are available for calculating earnings accruals as discussed in Chapter 1. In the questionnaire survey study of this thesis, audit quality is measured as effective interactions taking place between EAs and ACMs. The researcher expects trust to improve their interactions, resulting in improved effectiveness and efficiency of an audit process, so that the quality of audit may be enhanced.

This section has reviewed potential proxies for audit quality. It is determined that earnings accruals should be used in the archvial modelling study of this thesis and effective interactions between EAs and ACMs should be used in its questionnaire survey study. However, there are many models to estimate earnings accruals. For this reason, the next section discusses the pros and cons of each popular model so as to provide a better understanding of models that should be used in the study.

#### 2.4.4 Measures of Audit Quality: Discretionary Accruals Models

 Table 2: Discretionary Accrual Models

Jones (1991) model Modified Jones model (Dechow et al., 1995) Dechow and Dichev (2002) model Performance matched model (Kothari, Leone and Wasley, 2005)

Audit quality can be measured in different ways, as discussed in Section 2.4.3. One of the methods is earnings accruals. This section focuses on the discussions of discretionary accruals as a measure of audit quality. Accruals can be recognised in two ways: non-discretionary and discretionary accruals. Non-discretionary accruals are expected accruals, but discretionary accruals are unexpected accruals. Discretionary accruals are often the managed accruals. Five methods which have primarily been used to estimate discretionary accruals in the prior literature are reviewed.

Firstly, Jones (1991) model was used to estimate earnings accruals. This model captures the relationship between the change in revenues and the value of property plant and equipment in a single year. The residuals are considered to be discretionary accruals. However, this method has low explanatory power (R-square approximately 12 percent) because critics argue that the residuals are strongly and positively associated with total accruals (Dechow, Richardson and Tuna, 2003) and earnings performance, but negatively associated with cash flow performance. Therefore, there is a possibility that this method may be biased. For this reason, Dechow, Sloan and Sweeney (1995) modified the model of Jones (1991) to enhance its explanatory power. They excluded the change in receivables from change of revenues because credit sales are often manipulated. As a result of this modification, the correlation between expected revenues accruals and residuals can be eliminated, thus increasing it exploratory power (Dechow, Sloan and Sweeney, 1995).

Kothari, Leone and Wasley (2005) used a performance-matched model to estimate discretionary accruals. Sample firms were matched with control firms in accordance with the closest return on assets in the same industry and year. Discretionary accruals of the sample firms were deducted from those of the control firms. Discretionary accruals of both sample firms and control firms are estimated using Jones (1991) model or modified Jones (1991) model. However, since this model used the Jones (1991) model or modified Jones (1991) model, the problem of low exploratory power persisted in the performance-matched model. Furthermore, when discretionary accruals of sample firms were deducted from those of control firms, discretionary accruals may be cancelled out. Therefore, this problem may explain why the exploratory power remained low.

Dechow et al. (2010) explained that this method should be used when correlated performance is an important concern. Dechow and Dichev (2002) suggested a different way of measuring earnings quality or audit quality. They posited that change in working capital is the function of the cash flow in the last period, cash flow in the current period and cash flow in next period. Discretionary accruals are the standard deviation of the residuals. In addition, the absolute value of residuals also used as a proxy for accruals quality. They used this method because the accruals anticipate future cash flow and reverse when cash is received and paid when accruals are recognised for them. This exploratory power of this method is higher than that of the Jones (1991) model, modified Jones (1991) models and performance-matched model (Kothari, Leone and Wasley, 2005).

However, this model did not control for long term accruals because property, plant and equipment was not included in the model, so depreciation and impairment were not accounted for in their model, so Dechow and Dichev (2002) approach was a short term approach. Lastly, Francis et al. (2005) combined and modified the original Jones (1991) model and Dechow and Dichev (2002) model. Firstly, they used the original Jones (1991) model and Dechow and Dichev (2002) model to estimate the residuals. Subsequently, they took the standard deviation of the residuals estimated from Jones and Dechow and Dichev (2002) model as a dependent variable in the second equation where the independent variables are firm size, whereas the standard deviation of cash flow from operation, standard deviation of revenues, logarithm of operating cycle, and the number of years of loss. The residuals from the second equation are the discretionary accruals.

Because the Jones (1991) model has low exploratory power, the researcher did not use this model. Secondly, since this study does not emphasise the performance of the firms and performancematched model has low exploratory power, the researcher did not use the performance-matched model. Thirdly, the researcher did not use the Francis et al. (2005) model because it has not been extensively used in prior literature, which raises questions on its validity. Dechow and Dichev (2002) focused on short term accruals but completely ignored long-term accruals, so the researcher did not use it as well. Consequently, the researcher used the modified Jones model controlling for performance of sample firms because this model is expected to have a higher exploratory power and be more reliable. In addition, this model captures long-term discretionary accruals and short-term discretionary accruals.

## 2.5 Corporate Governance Developments in Hong Kong

Reviewing the development of Hong Kong corporate governance enables the researcher to understand the rights and responsibilities of a company's directors to protect the interests of stakeholders in Hong Kong and how these affect the structure and composition of the board and the AC, thereby the effectiveness of their oversight effort. It is noted that Hong Kong's corporate governance started to develop in the early 1990s (Jones, 2015; Dempsey, 2014; Kam, 2006; Standard and Poor, 2002). In 1993, the Stock Exchange introduced a requirement into its Listing Rules that every board of directors of a listed company must include at least two independent non-executive directors (Kam, 2006) and laid down guideline rules to ensure their independence (Kam, 2006). A Code of Best Practice was also established in 1993 in order to enhance the accountability of directors of listed companies to their shareholders (; Jones, 2015; Dempsey, 2014). Since 1999, the Code of Best Practice recommended that listed companies establish and disclose the existence of the AC (Dempsey, 2014). However, the requirements of good corporate governance were only found in non-legal and regulatory requirements, generally characterised as 'best practice' (Jones, 2015; Chau and Leung, 2006).

In 2004, the Hong Kong Stock Exchange issued a draft of Code on Corporate Governance Practices. According to this Code, companies are required to comply with 'code provisions' or explain why they do not follow 'recommended best practices' which are for guidance only (Cheng, Lui and Shum, 2015; Jones, 2015; Cheung et al., 2011). The Code's structure and contents were similar to the Combined Code implemented in the UK (Dempsey, 2014). The Code was implemented in 2005, commonly referred to as the Old Code. This was applicable to all companies listed on the SEHK (Dempsey, 2014). The Listing Rules required the mandatory establishment of the AC comprising of only non-executive directors and the appointment of at least three nonexecutive directors to the board with at least one having appropriate professional qualifications or experience in financial matters (Kam 2016; HKEx Appendix 14).

The Old Code was amended and renamed the Corporate Governance Code, which came into effect on 1 April 2012 (Lee and Barnes, 2017). It recommended significant changes to the corporate governance requirements in the Listing Rules and Corporate Governance Code (Lee and Barnes, 2017; Jones, 2015), including requirements for at least one third of the board to be independent non-executive directors (Jones, 2015; Dempsey, 2014).

The Corporate Governance Code made specific requirements and recommendations regarding the composition of the board of directors and its committees (HKEx Appendix 14: Lee and Barnes, 2017). The board of directors is a group of elected or appointed members who are collectively responsible for overseeing the functioning of a company (PwC, 2017; HKEx Appendix 14). The directors are required to fulfil their fiduciary duties and have the requisite levels of skill, care and diligence (Dempsey, 2014; HKEx Appendix 14; Standard and Poor, 2002). The board should also regularly review the performance of each director, who should act in the best interest of company (Dempsey, 2014; HKEx Appendix 14; Standard and Poor, 2002). It should also present a comprehensive assessment of a company's performance (Jones, 2015; HKEx Appendix 14) and ensure that the company maintains an effective internal control mechanism in order to safeguard the shareholders' investments and its assets (PwC, 2017; HKEx Appendix 14; Jones, 2015). It should also establish a formal and transparent arrangement to consider how it applies financial reporting and internal control principles whilst maintaining an appropriate relationship with a company's EAs (PwC, 2017; Dempsey, 2014; HKEx Appendix 14).

In order to effectively perform the oversight duties stated above, the board of directors should contain a balanced composition of executive, non-executive and independent non-executive directors in order to enable the board to exercise independent judgment (Cheng, Lui and Shum, 2015; Ching, Firth and Rui, 2006; HKEx Appendix 14). There should be a clear division between the roles of the chairman, who is responsible for leadership of the board, and the chief executive, who is responsible for running a company, so as to maintain a balance of power and au-

thority. The directors should have appropriate professional qualifications, more specifically accounting or associated financial management expertise. Directors should be provided with timely and appropriate information to help them make informed decisions (Dempsey, 2014; HKEx Appendix 14). The requirements for the structure and composition of board of directors and AC committees are as follows (Dempsey, 2014; HKEx Appendix 14):

- A company must appoint at least three independent non-executive directors who should represent at least one third of the board.
- At least one of the independent non-executive directors must have appropriate professional qualifications or accounting or related financial management expertise.
- A company must establish an audit committee comprising of non-executive directors only
- AC committees should have specific written terms of reference.

The Code also establishes a number of principles, followed by code provisions and recommended best practices (PwC, 2017; HKEx Appendix 14; Jones, 2015). Since then, companies must state in the corporate governance report as to whether they have complied with the code provisions (PwC, 2017; HKEx Appendix 14). The code provisions are not mandatory rules and the Code provides that deviations from them are acceptable if a company considers that it is more suitable not to comply with the Code (PwC, 2017; Dempsey, 2014; HKEx Appendix 14). Each company needs to consider its individual circumstances, the size and complexities of its operations as well as the nature of the risks confronted by it (Jones, 2015; Dempsey, 2014). It must also provide compelling reasons to explain why good corporate governance is achieved by means other than strict compliance with the code provisions. The investors and stakeholders who read the corporate governance report should then judge the explanation.

Prior studies conducted in Hong Kong concurred that the quality of corporate governance is positively associated with audit quality as reflected in heightened market values or higher earnings quality. For instance, using data from 2003 to 2005, Cheung et al. (2011) found that firms exhibiting improvements in the quality of corporate governance displayed a corresponding rise in market valuation. The quality of corporate governance was measured in the areas of rights of shareholders, equitable treatment of shareholders, role of stakeholders, disclosure and transparency and board responsibilities. Using data from 2002 to 2005, Cheung et al. (2010) noted that firms with concentrated ownership structures are associated with low quality corporate governance. They also observed that the quality of corporate governance was positively associated with market returns. Using data from 2001 to 2009, Lei and Song (2012) observed that the quality of board structure and internal corporate governance mechanisms was positively associated with firm value. Board structure was measured as its independence, balance of power and conflicts of interest. Internal corporate governance mechanism was measured using thirteen corporate governance attributes, such as a percentage of issued shares and number of substantial shareholders.

Using data from 1993 to 2000, Ching, Firth and Rui (2006) observed that independent directors and outside block shareholders constrained earnings management in family-controlled firms.

In summary, the importance of effective corporate governance has been highlighted since 1994. The rights and responsibilities of the board and AC have been strengthened with a view to safeguard the interest of stakeholders. While board of directors is responsible for the overall running of a company, the AC is its sub-committee that is responsible for specialising in ensuring high quality of its financial statement and audit (Chan et al., 2011; Chau and Leung, 2006). Therefore, next section discusses the developments of the AC in Hong Kong.

## 2.6 Developments of Audit Committee in Hong Kong

The establishment of the AC in Hong Kong can be traced back to year 1993 (Dempsey, 2014) when the Hong Kong Society of Accountants, known as Hong Kong Institute of Certified Public Accountants, adopted the recommendations of Cadbury Committee Report (1992) in order to enhance the efficacy of corporate governance of Hong Kong listed companies (Chan et al., 2011). One of the recommendations was to establish the AC so as to oversee financial reporting and audit processes in Hong Kong (Lin, Hutchinson and Percy, 2015; Chan et al., 2011). However, not many listed firms in Hong Kong paid attention to the recommendations for establishing the ACs due to the fact that this establishment was on a voluntary basis (Jaggie and Leung, 2007).

In December 1997, The Hong Kong Society of Accountants prepared a report titled *A Guide for the Formation of an Audit Committee* (HKSA, 1997) in order to encourage listed companies in Hong Kong to establish ACs. This guide also recommended the duties of an AC, such as review and supervision of the financial reporting along with internal control processes (Jones, 2015). It also recommended that an AC should have written terms of reference specifying their authority and duties (Lin et al., 2015; HKEx Appendix 14). An AC should consist of at least three members and that the majority of them should be independent (Lin, Hutchinson and Percy, 2015). Hong Kong Stock Exchange adopted these recommendations as the best practice guide of the Listing Rules. Subsequently, companies were required to disclose whether they have an AC (Lin, Hutchinson and Percy, 2015). Since the absence of an AC may influence the reputation of listed companies in Hong Kong, this, in turn, encouraged many firms to establish them voluntarily (Jones, 2015).

The Asian Financial Crisis from July 1997 to August 1998 showed that corporate governance mechanisms in Hong Kong were ridden with significant weaknesses (China Centre for Economic Research, 2000). The ineffectiveness of an AC was considered to be one of the reasons of the financial crisis. Therefore, in 2002, Hong Kong Stock Exchange (HKEx Appendix 14) recommended that Hong Kong listed companies enhance AC independence (Chan et al., 2011; Jaggie and Leung, 2007). In the same year, the Hong Kong Society of Accountants issued a report titled *A Guide for Effective Audit Committees* (HKSA 2002) to improve the guidelines pertaining to the formation of an AC (Jones, 2015).

In 2004, the details of the guideline issued by The Hong Kong Society of Accountants were contained in the guidelines of corporate governance practices issued by the Hong Kong Stock Exchange and Securities and Future Commission (HKEx 2004); this guideline highlighted its (AC) importance in augmenting the reliability of financial reports (Jaggie and Leung, 2007; Chau and Leung, 2006).

## In 2005, HKEx (Chapter 3, p7) stated:

"Every listed issuer must establish an audit committee comprising non-executive directors only. The AC must comprise a minimum of three members, at least one of whom is an independent non-executive director with appropriate professional qualifications or accounting or related financial management expertise as required under Listing Rule 3.10(2). The majority of the ACMs must be independent non-executive directors of the listed issuer. The AC must be chaired by an independent non-executive director."

Until 2005, the responsibilities and structures of the AC had been strengthened to enhance its oversight effects on financial reporting and audit processes (Jones, 2015; Chau and Leung, 2006; HKEx Appendix 15). To illustrate, the AC should review financial information and disclosures and focus mainly on its completeness, accuracy and fairness, including the appropriateness of statements made by directors of the company (HKEx Appendix 15). In particular, it must be satisfied with and endorse the financial statements and disclosures before presenting them to the full board of directors for approval (HKEx Appendix 15). This review of financial information and

disclosure should encompass major areas such as the application of significant accounting policies, the reasonableness of judgmental issues and estimates, disclosure, unusual items, significant audit adjustments, EAs' concerns and significant unadjusted audit differences, as well as consistency of financial information (Yu and Rudge, 2014; Chau and Leung 2006; Hong Kong Society of Accounts, 2002; HKEx Appendix 15).

The AC should also monitor internal and external audit coverage in order to ensure that all key risk areas are considered (Jones, 2015; HKEx Appendix 15). This may entail reviewing and discussing the audit plan whilst resolving issues relating to previous years (Jones, 2015). In addition, the AC should assess the effectiveness of the internal audit function, including the adequacy of its resources as well as its standing within the company (Chau and Leung, 2006). The AC should report and make recommendations to the entire board on matters relating to its work and findings in areas like financial and other reporting, internal control and risk management, audits and other duties and responsibilities (Yu and Rudge, 2014; Chau and Leung, 2006). Therefore, an effective AC is expected to enhance audit quality. (Lin, Hutchinson and Percy, 2015; Chan et al., 2011; Jaggi and Leung, 2007)

Extant studies in Hong Kong support the viewpoint that the establishment and structure of AC are important for improving financial statement and audit quality. For example, using data from 1999 to 2000, Jaggi and Leung (2007) observed that the presence of the AC is important to con-

strain earnings management; however, the effectiveness of the AC is significantly reduced when family members are present on corporate boards. Using data from 2005 to 2006 in Hong Kong Stock Exchange, Leung, Richardson and Jaggi (2014) observed a positive relationship between the independence of AC and firm performance for non-family firms. Using data in 2006, Chan et al. (2011) noted that AC meetings and disclosure of sufficiency of resources provided to the AC were positively related with the firm performance measured by Tobin's Q. Using data relating to Chinese firms cross-listed in Hong Kong from 2004 to 2008, Lin, Hutchinson and Percy (2015) found that AC independence and experience were negatively associated with earnings management, but pointed that there was a significant and positive relationship between AC independence and experience and experience and earnings management amidst the presence of government officials in the AC.

## **2.7 Chapter Summary**

This chapter discussed the agency theory and stakeholder theory to argue that an effective AC should exist to safeguard the interest of stakeholders, as well as social interdependence theory to argue that ACMs and EAs should have positive interactions to establish trust between them. If that is the case, they may improve the effectiveness and efficiency of an audit, so that audit quality may be enhanced. It is followed by a discussion of earnings management and audit quality so that it forms a basis to making the argument that audit quality is important to deter earnings management. Thereafter, the chapter provides the framework of the corporate governance and AC to demonstrate that the oversight role of AC is to monitor audit quality by exercising its

rights to monitor various activities pertaining to the enhancement of audit quality, such as the determination of scope of audit, appropriateness of risk assessment and progress of the audit. The next chapter discusses the findings of prior studies about the effectiveness of the AC to constrain earnings management to identify the desirable characteristics to facilitate their oversight roles.

# CHAPTER 3 LITERATURE REVIEW (ARCHIVAL MODELLING STUDY)

## **3.1 Introduction**

Chapter 2 provided the background and theoretical framework for the study. This study now turns to the association between AC characteristics and audit quality. The mere presence of an AC is unlikely to augment its monitoring activity (Garcı'a, Barbadillo and Pe'rez, 2012; Krishnan, Wen and Zhao, 2011). Accordingly, numerous studies had been conducted in the past to explore the characteristics of the AC which contribute to the efficacy of the AC, financial reporting and audit quality. These characteristics include its size representing the number of directors on the AC (Yasser and Al Mamun, 2016; Nelson and Devi, 2013; Baxter and Cotter, 2009), independence (Bruynseels and Cardinaels, 2014; Leung, Richardson, and Jaggi, 2014), diligence (Mohammad et al., 2016; Soliman and Ragab, 2014; Alzeban and Sawan, 2015), expertise (Shepardson, 2018; Zalata, Tauringana and Tingbani, 2018; Sulaiman 2017; Badolato, Donelson and Ege, 2014; Woidtke and Yeh, 2013), outside directorships (Habbash, Sindzingue and Salama, 2012; Sharma and Iselin, 2012), tenure (Rickling, 2014; Chan, Liu and Sun, 2013) as well as age (Maraghni and Nekhili, 2014; Dao, Huang and Zhu, 2013). The reason why this study focuses on these characteristics is that they demonstrate ACMs' resources, willingness, effort, ability and experience to fulfil their responsibility of monitoring financial statements and audit processes that may influence audit quality. This section reviews prior studies of the expected effects of these characteristics relating to audit quality. The reviews enable the researcher to form seven hypotheses for the archival modelling study. The summary of the chapter content is also provided.

Figure 4 summarises the effects of AC characteristics as expected on audit quality.

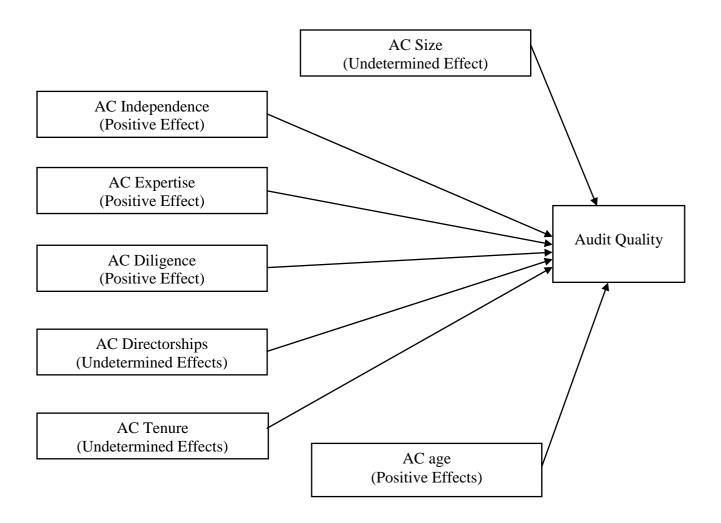


Figure 4: AC Characteristics and Audit Quality

#### **3.2 Audit Committee Size**

The first AC characteristic is its size, indicating the potential manpower availability for the functions of the AC. A large AC may have more expertise, experience and manpower to oversee audit quality (Yasser and Al Mamun, 2016; Rickling, 2014; Nelson and Devi, 2013; Baxter and Cotter, 2009). In a small AC, directors may be unable to perform their duties efficiently since their workload of overseeing audit quality is predicated on a small number of directors (Basiruddin, 2011; Vafeas, 2005). UK Corporate Governance Combined Code (2012), HKSA (2002) and Sarbanes-Oxley Act (2002) suggested that the minimum number of ACMs should be three.

The findings of prior studies are mixed. For example, Vlaminck and Sarens (2015) investigated the AC characteristics and financial statement quality in the context of Belgium where the establishment of AC is relatively new. AC characteristics were measured in terms of its size, independence, expertise, diligence and directorships. They stated that independent members are more resistant to managers' pressure and are better equipped to maintain their objectivity to monitor the financial statements prepared by managers. ACMs with financial expertise have sufficiently broad range of competencies that allows them to perform their oversight role. ACMs with excessive directorships may be too busy performing financial reporting process, but their directorships help them gain more experience of monitoring by serving as directors in other companies. Diligent ACMs may have more meetings to discuss issues with regard to overseeing financial reporting process. A large AC may have greater diversity of expertise to perform their role. Therefore, these characteristics should enable them to effectively monitor financial reporting process. Data were collected from 60 observations. Financial reporting quality was measured as discretionary accruals estimated by modified Jones model. Its size was measured as the number of ACMs. After controlling for the effects of firm size, return on assets, leverage and auditor choice, they noted that only its independence and directorships were positively related to financial reporting quality, but its size and diligent did not pertain to quality. However, the limitation is that their study only had 60 observations. The sample size is too small. This may limit its generabilities of the findings.

Baxter and Cotter (2009) made use of a bigger sample size to examine this issue. They evaluated the relationships between the size of ACs and earnings quality for a sample of Australian listed companies in 2001. This year was chosen because of the introduction of mandatory AC requirements. They contended that AC size, independence and expertise negatively relate to earnings management. The sample was drawn from the top 500 Australian companies listed on the ASX with financial years ending during 2001. In their study, they found a sample of as many as 309 companies. They measured earnings quality using the Jones (1991) and Dechow and Dichev (2002) model but did not find a significant association between AC size and earnings quality. One drawback is that this study was conducted within a span of one year. Therefore, the findings may not be generalised to other years.

Other studies found that AC size enhanced audit or financial reporting quality. For instance, Yasser and Al Mamun (2016) examined the AC structure on earnings management in Asia Pacific. Data were obtained from 2011 to 2013 in Australia (60 firms), Malaysia (90 firms) and Pakistan (90 firms). They suggested that a large AC allowed ACMs to spread over their workload and commit more manpower in order to monitor managers and detect fraudulent behaviour. AC meetings enables them to remain informed and knowledgeable about accounting or auditing issues and can direct both internal and external audit resources to address matters in a timely fashion. AC independence enables them to share unbiased views of financial statement quality. AC structure was measured as the total number of meetings attended by AC chair in a year, the number of ACMs, their shareholdings as well as their independence. Earnings management was measured as discretionary accruals estimated by performance-adjusted discretionary accruals developed by Ashbaugh et al. (2003) and Chen et al. (2010). After controlling for the effects of board size, firm age and return on equity, they observed that a larger AC is more effective in reducing earnings management. However, the limitation was that Australia, Malaysia and Pakistan had very different corporate governance requirements. The findings may not be generalised to a specific country.

The occurrence of financial restatements may indicate that the oversight of the AC on financial statements is ineffective (Lin, Li and Yang. 2006). The General Accountability Office (GAO 2006, p.1) explained that "a financial restatement occurs when a company, either voluntarily or prompted by EAs or regulators, revises public financial information that was previously report-

ed". It may be induced by misapplication of the accounting standard and fraudulent behaviours (Mohammad et al., 2016; Abdullah, Yusof and Nor, 2010). In a study pertaining to AC characteristics and earnings restatement, Lin, Li and Yang (2006) investigated the relationships between characteristics of an AC recommended by the BRC in 1999 and earnings restatement. AC size was measured as an indicator whether the AC has a minimum of four numbers. They found 106 listed companies in the US in year 2000. Their dependent variable is reported earnings restatement. They controlled for the effects of auditor tenure, audit fees, non-audit fees, operating cash flows, leverage and market value to book value ratio.

Nelson and Devi (2013) examined the relationship between AC expertise and financial reporting quality for a sample of Malaysian listed companies. They suggested that AC size, expertise and independence negatively relate to earnings management. AC size was measured in terms of the number of ACMs. The sample firms were chosen in the year 2008 because the Malaysian Code on Corporate Governance (MCCG) was revised a year before in 2007. The revision was intended to strengthen the board of directors and ACs to discharge their roles. The final sample had 267 observations. Earnings management was measured as discretionary accruals estimated by modified Jones Model. However, after controlling for the effects of firm size, board size, length of listing, directors' ownership and industry sectors, they found that AC size positively related to earnings management. One caveat is that this study did not investigate the group thinking impacts of a large AC. ACMs may think that they may be able to reduce their efforts in a large AC

because they may depend on other members to perform the duties. Therefore, future research may investigate the effects of group thinking effects of ACMs in their oversight role.

In Nigeria. the Companies and Allied Matters Acts (1990) stated that a public limited company should have an AC with a maximum of six members of equal representation of three members each representing the management, directors and shareholders. Against this backdrop, Ayemere and Elijah (2015) investigated the effects of AC characteristics on financial statement quality in Nigeria. Avemere and Elijah (2015) suggested that a larger AC is more effective due to the fact that the responsibilities, skills, background and power should be enhanced in a larger AC. Financial statement quality is measured as discretionary accruals by modified Jones model. AC characteristics were measured as AC independence, AC financial expertise, the number of AC meetings and AC size. They obtained data from the firms listed on the stock exchange in Nigeria from 2006 to 2013. The final sample contained 453 firm-year observations. After controlling for the effects of firm size and leverage, they observed that AC size, financial expertise, independence and meetings had positive impacts on financial reporting quality. The limitation is that their study did not control for the effects of board characteristics. In addition to the AC, the board may serve as a monitoring mechanism to oversee managers and appoint ACMs as well as EAs. Therefore, board characteristics may positively impact audit or financial reporting quality.

Shankaraiah and Amiri (2017) conducted a study of AC characteristics in a very large scope. They examined the impacts of AC quality on financial reporting quality in India. They collected the data from firms listed on Bombay Stock Exchanges from 2002 to 2012 with at least Rs 50,000,000. They selected this time-frame because the Company Act in India was amended to require that every public company with share capital of at least Rs 50,000,000 must have an AC. The Listing Agreement was amended to require that an AC should have a minimum of three members, with two-thirds of them being independent. In this study, 1.330 companies were randomly selected and the authors followed them from 2002 to 2012. Financial reporting quality was measured as the natural log of the absolute value of abnormal accrual measured by the Performance Matched Modified Jones model. AC quality was measured as the proportion of AC members who also sit on the compensation committee, AC independence, AC legal expertise, AC accounting expertise, number of AC meetings and AC size. After controlling for the effects of board characteristics, absolute value of change in net income and natural log of total assets, they noted that board size, AC meetings and AC size are negatively associated with the discretionary accruals. However, one limitation is that the result of this study may not be generalised to family firms in which family members may perform the oversight role in monitoring audit quality or financial reporting quality.

Ho and Kang (2013) stated that family firms have historical presence in their firms, usually holding a large equity position and director positions. They are in a unique position to influence and monitor their firms. Therefore, this has two cascading effects. Firstly, they may demand lower audit quality due to lower asymmetry and conflicts of interest between managers and investors, This explains why they are unlikely to hire Big 4 auditors. Secondly, the concentrated ownership may induce agency conflicts between large and small shareholders. They may hire Big 4 auditors as an indication of high audit quality in order to signal that financial reporting is credible.

There are two effects on audit fees. Firstly, since family owners have stronger incentives to monitor managers, which may lead to lower risk of material financial misstatements, lower audit effort is needed. Hence, lower audit fees may be charged. Secondly, family owners may have strong incentives to engage in complex transactions that benefit themselves such as related-party transactions. This may increase the risk of fraudulent reporting. EAs are required to perform more procedures in order to reduce audit risk to an acceptable level, so audit fees may be higher. Ho and Kang (2013) investigated auditor choice and audit fees in family firms. In particular, they used AC independence, financial expertise, size and meetings as control variable for AC characteristics. Data were collected from the firms listed on the Standard and Poor 1500 from 2000 to 2008. The final sample had 9,219 firm-year observations. They found that family firms are less likely to hire Big4 auditor and have lower audit fees. Of relevance are the findings that AC size positively related to the appointment of Big4 auditor and audit fees in both samples (family and non-family firms). This, in turn, indicates that a large AC may hire high quality auditor and demand greater audit efforts. Table 3 summarises the prior research of AC size.

# Table 3: AC Size

Studies	Measures of Size	Results
Vlaminck and Sarens (2015)	Number of ACMs	AC size did not relate to finan- cial reporting quality, but a negative relationship for AC independence and AC's direc- torships.
Baxter and Cotter (2009)	Number of ACMs	AC size did not relate to dis- cretionary accruals.
Yasser and Al Mamun (2016)	Number of ACMs	AC size negatively related to earnings management.
Lin, Li and Yang (2006)	An indicator whether the AC size at least comprises of four in number.	AC size negatively related to earnings restatement.
Nelson and Devi (2013)	Number of ACMs	AC size negatively related to discretionary accruals estimat- ed by modified Jones model.

Ayemere and Elijah (2015)	Number of ACMs	AC size negatively related to
		discretionary accruals estimat-
		ed by modified Jones model.
Shankaraiah and Amiri (2017)	Number of ACMs	AC size negatively related to
		discretionary accruals estimat-
		ed by modified Jones model.
Ho and Kang (2013)	Number of ACMs	AC size positively related to
		the appointment of Big4 audi-
		tor and audit fees in both sam-
		ples (family and non-family
		firms).

In conclusion, since the findings are mixed, the researcher expects the beta co-efficient sign between the size of an AC and audit quality not to have a predetermined sign. The null hypothesis to be tested is stated as:

H1: There is no relationship between audit quality and the size of an AC.

# **3.3 Audit Committee Independence**

Having many directors on the AC is not enough to cause AC efficiency. ACMs must also exercise independent judgment in order to monitor audit quality. For this reason, I turn to the second important characteristic of an AC: Independence. AC independence refers to the freedom from any business or other relationship that can materially interfere with the exercise of independent judgment of audit committee members (Hong Kong Society of Accountants, 2002; Sarbanes Oxley Act 2002; Cadbury Committee, 1992). An independent committee can make its own judgment with audit evidence provided by EAs and challenge the position of managers for their misstated financial statements (Liao and Hsu, 2013; Carcello, et al., 2011; Sharma and Sharma, 2011; Dimitropoulos and Asteriou 2010; Duchin, Matsusaka and Ozbas, 2010).

Higgs Report (2002) and The UK Corporate Governance Code (2012) provided some examples that a director in the board or in its committee cannot be deemed independent if a director

- has been an employee of the company or group within the last five years;
- has, or has had within the last three years, a material business relationship with the company either directly, or as a partner, shareholder, director or senior employee of an entity that has such a relationship with the company;
- has received or continues to receive additional remuneration from the company in addition to a director's fee, participates in the company's share option or a performance-related pay scheme, or is an existing member of the company's pension scheme;

- has close family ties with any of the company's advisers, directors or senior employees;
   holds cross-directorships or has significant links other directors.
- holds cross-directorships or has significant links with other directors through involvement in other companies or bodies;
- represents a significant shareholder; or
- has served on the board for more than nine years from the date of their first election

Blue Ribbon Committee (1999) stated that a listed company must have an AC with at least three directors who are independent. Correspondingly, Higgs Report and Smith Report (2003) pointed out that an AC must include a minimum of three members, who are all independent non-executive directors. It is noteworthy that the Blue Ribbon Committee defined independence as the exclusion of current and former employees, relatives of management, persons receiving compensation from the company (except directors' fees) or controlling for-profit organizations receiving from or paying the corporation significant sums, and compensation committee interlocking directorships.

According to the SOX (2002), an AC is independent if its member does not, other than in his or her capacity as a member of the audit committee, board of directors, or any other board committee:

• Accept any consulting, advisory or other compensatory fee from the issuer; or

• Become an affiliated person of the issuer or any subsidiary thereof.

Cadbury Report (1992) concurred that an independent AC, which can be characterised by the number of non-executive directors, serves the role of ascertaining the checks and balances on executive directors and resolves the conflict of interest between executive directors and share-holders. Non-executive directors are the best suited executives for this role because they are less directly affected and they can give their independent judgment.

However, non-executive directors only refer to those directors who are not involved in day-today operations of companies (HKICPA 2013a), but may not be independent because they may have some relationships with companies. For example, non-executive directors may have business relationships with the companies, have worked for the companies or have served as EAs of the companies in the past. Besides not being involved in operations of companies, independent non-executive directors do not enter into any relationship with the companies that could materially interfere with the exercise of independent judgment of ACMs apart from the relationship as ACMs of the companies.

HICPA (2013a) recognised the difference between non-executive directors and independent nonexecutive directors in the requirements of AC independence. It stated that the majority of ACMs must be independent non-executive directors and that the chairman of the AC needs to be independent non-executive directors. However, the definition of majority is not defined in Hong Kong. Therefore, it is possible for a company to determine the level of independence that is the most suitable for it. It implies that although majority of ACMs must be independent non-executive directors, executive directors and non-executive directors can have a presence on the AC.

Prior research supports the view that AC independence is important for the purpose of enhancing audit quality. In a study that investigated whether the relationships between the board characteristics, board committee independence and firm performance are moderated by the concentration of family ownership, Leung, Richardson and Jaggi (2014) suggested that the independent directors are more effective in fulfilling their roles. In particular, independent ACMs may objectively review financial statements, audit processes and internal controls in order to ensure that the accounting information remains unbiased. The unbiased accounting information may enhance the firm's performance. However, family firms may use their power to appoint individuals to serve as ACMs due to their relationships with family members so that family ownership concentration may negatively relate to the appointment of independent members on the AC (Leung, Richardson and Jaggi 2014).

They found a sample of 487 firms (from 2005 to 2006) on the Hong Kong Stock Exchange. These years were chosen because the latest Code on Corporate Governance Practices was first implemented by Hong Kong firms during the financial year ending December 2005. Firm performance was measured as market-adjusted returns. If a firm is family-owned, the indicator will show a value of 1, otherwise it would denote 0. They controlled for the effects of firm size, average percentage growth in total assets, percentage of outside directors' ownership, types of industry, CEO ownership and the number of foreign subsidiaries. According to their observation, there was a positive relationship between the independence of the board and the independence of the AC. There was also a positive relationship between the independence of the AC and firm performance with regard to non-family firms. This relationship was moderated by the concentration of family ownership. However, the one caveat is that this study did not control for the effects of other AC characteristics. For instance, AC diligence and sufficiency of resource provided to AC may allow ACMs to perform their role more efficaciously.

If ACMs are independent, they may be perceived to constrain the managers to manipulate the earnings, implying that a firm's value would increase. In addition, an AC requires adequate resources to fulfil their role, otherwise their role is deemed ceremonial at best (Chen et al. 2011). Chen et al. (2011) examined whether the specific structural and operational characteristics of an AC in Hong Kong may encourage an AC to safeguard shareholders' interest. The sufficiency of resource provided to an AC was measured as an indicator with a value of 1 for the firms which made it evident in their disclosures that adequate resources were provided to ACs in their annual reports, otherwise 0. On the other hand, independence was measured as the proportion of independent non-executive directors on an AC. The firm value was measured as Tobin's Q.

They used a sample of 223 companies that were listed on the main board of the HKSE in 2006 and controlled for the effects of other AC variables as well as firm variables. They did not find evidence that AC independence and financial expertise was associated with firm value, but did observe that the disclosure of whether an AC was provided with sufficient resource was a significant factor to augment firm value. However, the one shortcoming is that sufficient resource could not stand alone as a significant independent variable. If an AC is neither independent nor competent, resource may not be used judiciously to oversee financial reporting and audit process. Therefore, future research may entail studying the moderating effects of resource sufficiency on the association between AC characteristics and firm value. Another caveat is that this study did not examine ACMs' independence in terms of relationships with CEOs.

While the above studies seemed to examine ACMs' independence, they may not be independent in substance given that they may have personal relationships with the CEOs (Bruynseels and Cardinaels, 2014). Such personal relationships are not required to be disclosed in annual reports. Notably, CEOs often appoint directors from their informal social networks (Beasley et al., 2009; Finkelstein and Hambrick, 1996). These friendly relationships impel them to be less critical of the CEO's financial reporting policies and less likely to challenge managers' assumptions during the conflicts arising between managers and EAs (DeZoort, Hermanson and Houston, 2008; De-Zoort and Salterio, 2001).

When investigating the effects of the social ties between ACMs and CEOs on oversight quality

of an AC, Bruynseels and Cardinaels (2014) selected the sample firms from 2004 to 2008. They measured CEO-ACM connections in terms of past or present employment, education, or non-professional activities. They made 625 firm-year observations for this four-year period in the US. The oversight quality of ACMs was measured in terms of discretionary accruals, audit fees, going concern opinions, disclosure of internal control weakness as well as internal control deficiencies.

After controlling for the board and AC effectiveness, profitability, industry type and leverage, they observed that the social ties established through the CEO's friendship network adversely affected oversight quality. Managers of such companies engaged more in earnings management, and their ACMs purchased less audit efforts. This was evident in lower audit fees. Moreover, they observed that EAs in these companies were less likely to report internal control deficiencies or issue going-concern opinions for companies in distress when friendships were present.

These results imply that AC independence, which was impaired by social ties with CEOs, may affect the oversight quality of ACMs. However, one caveat is that the measures of social ties were unable to capture the true interactions between them. For instance, despite graduating from the same school, they may not be able to establish connections with one another due to lack of interactions. AC independence was not threatened in this case. Further, research may use social ties as a context to investigate how they had interacted and how to impair AC independence.

Archival research above used proxies such as abnormal accruals, market returns and restatement of financial statements in order to measure the levels of audit quality, but they may be unable to capture important elements of audit quality such as ACMs' and EAs' judgments, thereby threatening the internal validity of the findings. In this regard, the usage of experiments helps enhance internal validity by facilitating the more direct measurement of audit quality. For instance, ACMs' support for EAs' position when they have disagreements with managers is not disclosed in the financial statements, which implies that archival research cannot capture their judgments. However, their support for EAs is known to enhance audit quality significantly.

DeZoort and Salterio (2001) investigated the effects of AC independence and expertise about the extent to which ACMs support the position of EAs when they have disagreements with managers. As part of this study, they invited 340 ACMs to participate; 68 Canadian ACMs participated, leading to a response rate of 27 percent. After a hypothetical case was presented to the participants, they were then asked to fill out questionnaires. The hypothetical case pertained to the change in accounting policy of revenue recognition of an electronic goods retailer. The managers wanted to bring about changes in the accounting policy, but EAs asserted that the revenue recognition policy propounded by managers was inappropriate in reflecting the stream of revenues. After making the adjustment, net income will decrease by 37 percent and the debt-to-equity ratio will violate the debt covenant. Due to their disagreements about the revenue recognition policy, these participants were required to act as ACMs in the hypothetical company in order to handle the disagreements. They had to decide whether they should choose between EAs and managers

in terms of their stance.

In order to measure AC independence, participants were asked for the number of corporate boards where they served as independent directors. They were also asked whether they served as both senior management and directors on the board of a company. The authors assumed that if ACMs had more experience as independent directors, they may be able to make more independent decisions (Libby and Tan 1995). Additionally, if they serve as both directors and senior management on the board, experience may be biased towards understanding and sympathising with managers' position, thereby curtailing independence. In order to measure financial reporting and auditing knowledge, they were asked to respond to the items contained in the questionnaires. They observed that serving as both board and senior management encouraged them to support managers' position. Further, they found that while ACMs with knowledge of audit reporting are more likely to support EAs' position, knowledge of financial reporting did not significantly relate to their judgments.

These results imply that independent ACMs with sufficient audit reporting knowledge may be more likely to enhance audit quality. The results were in consonance with the suggestions of SOX, Cadbury Report and Hong Kong Stock Exchange that an AC should be sufficiently independent to challenge managers' assumption and support EAs' position. However, one caveat is that the design of this case ignored the interactions taking place between EAs and ACMs. However, their interactions are an important factor in deciding whether ACMs should support EAs' position.

Audit quality is also influenced by clients' internal audit function because EAs often rely on the work of internal audit function (Paino, Razali and Jabar, 2015; Suwaidan and Qasim, 2010). Therefore, the issues of audit quality can be investigated in connection with the quality of the internal audit function. In this context, Zaman and Sarens (2013) examined the relationships between AC characteristics and informal interactions between ACs and internal audit functions as well as their concomitant effects on internal audit quality. According to their findings, internal audit assumes importance for financial reporting quality because ACMs rely on the work of the internal audit function to develop their understanding of risk management and efficacy of internal control. ACMs may fulfil their oversight role more effectively with high quality internal audit function. They also suggested that independent ACMs may face greater information asymmetry. This explains why independent ACMs are likely to seek more information whilst performing their monitoring responsibilities.

Additionally, active ACMs may want to obtain more information and be more interested in interacting with the internal function. They posited that oversight of internal audit function is often performed in an informal manner and private meetings. Further they suggested that information interactions between ACMs and internal auditors may improve overall exchange of relevant and reliable information. Consequently, interactions between ACMs and internal audit functions can enhance the quality of the internal audit function.

The data were collected using a questionnaire survey sent to 672 Chief Audit Executives (CAE) in the UK. 187 usable responses were collected, yielding a response rate of 27.8 percent. Informal interactions between them were measured as whether CAEs have informal interactions with AC chair or ACMs besides the regular pre-scheduled meetings. They were asked to indicate the number of independent ACMs, total number of the firms' ACMs and AC chair's knowledge and experience relevant to risk management, internal and external audit and corporate governance. They were asked to indicate whether 95 percent of the internal audit plan was completed in order to measure internal audit quality. If so, it assumed that the quality of internal audit function was high. They were then asked whether their internal audit function was subject to formal and external quality assurance and whether their function complied with the Code of Ethics and Standards issued by Institute of Internal Auditors.

They controlled for the effects of whether these firms are financial companies or listed on the stock exchange. Using regression analysis, they observed that AC independence positively related to informal interactions, which, in effect, positively related to internal audit function quality. However, this study ignored one important determinant of interactions: the trust between ACMs and CAEs. Without this trust, CAEs may not be willing to interact with ACMs, although ACMs are independent. Therefore, future research should examine the effects of CAEs' trust in ACMs on their interactions and audit quality.

Table 4 underpins previous studies about AC independence and audit quality in the literature.

Studies	Measures of Independence	Results
Leung, Richardson	Independence was measured as the	There was a positive relationship
and Jaggi (2014)	proportion of independent non-	between the independence of the
	executive directors on an AC.	board and that of board commit-
		tees, including the AC.
		Also, there was a positive rela-
		tionship between the independ-
		ence of board committees and
		firm performance for non-family
		firms. The relationship was
		moderated by the concentration
		of family ownership.
Chen et al. (2011)	AC Independence was measured as	The authors did not find evi-
	the proportion of independent non-	dence that AC independence and
	executive directors on an AC.	financial expertise related to firm
		value, but observed that the dis-

 Table 4: AC Independence

		closure of whether an AC was
		provided with sufficient resource
		was a significant factor to en-
		hance firm value.
Bruynseels and	Independence was measured as a	Managers of such companies
Cardinaels (2014)	measure of ACMs' connections with	engaged more in earnings man-
	CEO in terms of past or present em-	agement.
	ployment, education or non-	
	professional activities.	Their ACMs purchased less au-
		dit efforts - reflected in lower
		audit fees.
		EAs in these companies were
		less likely to report internal con-
		trol deficiencies or issue going-
		concern opinions for firm in dis-
		tress when friendships were pre-
		sent.

DeZoort and	AC independence was measured as	Serving as both board and man-
Salterio (2001)	the number of independent corporate	agement membership encour-
	boards served and whether senior	aged ACMs to support manag-
	managers also served as directors on	ers' positions because AC inde-
	the board.	pendence was reduced.
Zaman and Sarens	AC independence was measured as	They observed that AC inde-
(2013)	the proportion of independent ACMs	pendence positively related to
	on an AC using a questionnaire sur-	informal interactions, which, in
	vey.	effect, positively related to inter-
		nal audit function quality.

To conclude, prior studies suggest that independent directors on an AC may protect stakeholders' interests by monitoring audit quality. This is congruent with the expectations of the corporate governance in the US (Blue Ribbon Committee and Sarbanes Oxley Act), UK (Smith Report) and Hong Kong (Hong Kong Code on Corporate Governance). The researcher opines that the beta co-efficient sign between the proportion of independent non-executive directors on an AC and audit quality is positive. The null hypothesis to be tested is stated as:

H2: There is a negative relationship between audit quality and AC independence.

### **3.4 Audit Committee Diligence**

In addition to being independent, an AC should work diligently to fulfil their responsibility in order to monitor the financial reporting and audit processes (Ho, Liu and Wang, 2014; Rickling, 2014; Suarez et al., 2013; The UK Corporate Governance Code, 2012; Sharma and Iselin, 2012; Hong Kong Society of Accountants, 2002). Otherwise, audit quality may not be high despite the independence of the directors on the AC because their presence is ceremonial. The diligence of ACs can be measured by the number of AC meetings.

Higgs Report (2003) and Smith Report (2003) suggested that the meetings of an AC should not be fewer than three during a year. Correspondingly, Hong Kong Society of Accountants (2002) stated that a typical AC should meet at least three or four times in a year, depending on the range and complexity of the matters that an AC need to address. In this regard, Hong Kong Society of Accountants (2002) opined that each meeting should be held for between half-a-day and a day. ACMs should meet to address the matters of internal control, external audits, risk management as well as other duties and responsibilities. Deloitte (2012, p.6) stated that "the importance of AC meetings is to allow numbers to foster better communication among non-management directors, pose questions of concerns regarding management, external auditors, resources or other issues related to financial reporting and internal control".

Prior studies were conducted to examine the relationships between the number of AC meetings and the effectiveness of their oversight role. For instance, Soliman and Ragab (2014) investigated the effects of AC characteristics on earnings management in Egypt. In the year 2000, the establishment of an AC was made mandatory for all listed companies across the country. The top 50 most active-traded companies listed on the Egyptian Stock Exchange were collected from 2007 to 2010. The final sample had 40 firms. Earnings management was measured as discretionary accruals measured by modified Jones model. AC characteristics were measured as AC size, independence, financial expertise and number of meetings. They stated that a higher frequency of meetings enables them to have sufficient time to perform their oversight role, so that managers may find it more difficult to manage earnings. After controlling for firm size, auditor choice, leverage and cash flows from operations, they found that AC independence, AC financial expertise and AC meetings have negative correlations with earnings management.

Alzeban and Sawan (2015) examined the impacts of AC characteristics on perceptions of the effectiveness of implementing internal audit recommendations. They stated that AC independence, expertise, diligence and size do influence the perceptions. They also claimed that independent ACMs are more likely to preserve their own reputation, so they require higher audit quality by demanding internal audit functions to enhance the scope of activities and improve internal controls. In addition, they suggested that a higher number of AC meetings do encourage ACMs to provide more support to internal audit functions in order to implement recommendations. Their expertise enables them to communicate with external and internal auditors for the implementation. A large AC may have more manpower to monitor internal audit functions, so it is more likely that internal audit recommendation can be successfully implemented. Equally, frequent meetings between ACMs and Chief Audit Executives (CAE) are known to provide more opportunities for them to be able to exchange information on facilitating internal auditors' work and improving the financial reporting system.

Data were collected using a questionnaire survey sent to 542 CAEs of UK firms listed on the London Stock Exchange. As many as 188 usable questionnaires were received, yielding a response rate of 34 percent. The perception of effectiveness was measured as the percentage of recommendations suggested by the CAEs and implemented by the internal audit functions. According to their observation, AC independence, financial expertise and frequent meetings between the AC and CAEs had positive correlations with the perceptions of the efficacy of implementations. However, this study did not reveal how AC characteristics influence their decisions in monitoring external auditor independence. If EAs provided significant amount of non-audit service fees to the client, they may not be willing to report that clients' managers engage in fraudulent financial reporting, due to the fear that mangers may refuse to use their services. If that happens, they will lose a significant amount of revenues from the client.

Audit quality may be examined in relation to non-audit service fees, which may be used as a proxy for auditor independence. High non-audit fee ratio may also imply low AC effectiveness in monitoring external auditor independence (Lary and Taylor, 2012). Non-audit service fees are considered to impair auditor independence owing to the economic bond between the audit client

and EAs. Non-audit fees are expected to reduce the willingness of EAs to challenge managers (Lary and Talor, 2012). Notably, Lary and Taylor (2012) investigated the linkage between AC characteristics and the effectiveness of their oversight role in Australia. AC characteristics were recognised as AC size, expertise and diligence. According to their findings, AC diligence underpins the desire of ACMs to conduct their monitoring roles. AC effectiveness was measured as the incidence and severity of restatements and non-audit fee ratio. The occurrence of restatement reflects low AC effectiveness due to its failure to improve the quality of financial statements.

Data were collected by identifying companies listed on the Australia Stock Exchange that had recorded a restatement from 2004 to 2009. In this process, 60 companies reporting a restatement were identified. These restatement companies were matched with non-restatement companies based on their company size. The final sample consisted of 120 companies. They measured diligence on the basis of whether the AC had at least three members and whether it met at least four times a year. After controlling for the effects of auditor switch, industry type, board characteristics and natural log of total assets, the authors noted that AC independence and expertise lowered incidence and severity of financial restatements, while an AC, which had at least three members and four meetings, had negative correlations with non-audit fees ratio. However, this study ignored the ACs' characteristics on audit fees which may be used to proxy for EAs' effort. If an EA puts in more effort in the audit process, it could be possible to enhance audit quality (Zaman, Hudaib and Haniffa, 2011).

Zaman, Hudaib and Haniffa (2011) investigated the relationship between governance quality and auditor remuneration in the UK by utilising the composite measure of four dimensions of AC effectiveness: AC independence, financial expertise, diligence and size. They observed that AC diligence demonstrates whether these ACs are active. If so, they may require a wider audit scope, thereby increasing the audit fees. Also, if they demand a higher effort from EAs, there may be less need for managers to use non-audit services, so that non-audit fees may be reduced. Data were collected from FTSE 350 between 2001 and 2004. The final sample contained 540 firm-year observations.

Natural logarithm of audit fees and non-audit service fees were the dependent variables. They measured AC diligence as the number of AC meetings. A value of 1 was assigned if an AC was fully independent, otherwise 0. Similarly, a value of 1 was assigned if it had at least one financial expert, otherwise 0, whereas a value of 1 was assigned if it had at least three meetings. A value of 1 was assigned if it had at least three meetings. A value of 1 was assigned if it had at least three meetings. A value of 1 was assigned if it had at least three meetings. A value of 1 was assigned if it had at least three meetings. A value of 1 was assigned if it had at least three meetings. A value of 1 was assigned if it had at least three members. AC effectiveness was measured as the sum of the scores for AC independence, diligence, size and expertise. Therefore, the maximum score was 4, with the minimum score being 0.

After controlling for the effects of board characteristics, duality of CEO and chairman of the board, firm size, merger and acquisition, natural logarithm of number of subsidiaries, leverage, loss, industry type and number of block shareholders, the authors noted that AC effectiveness, AC independence, AC diligence and AC size positively related to the natural logarithm of audit

fees. They also noted that AC effectiveness, AC independence and financial expertise negatively related to non-audit service fees, although AC size positively related to them. One caveat is that this study did not examine the effects of AC characteristics on the early warnings of internal control problem before year-end external audit. If an AC is found to be effective, they should be able to require managers to report that internal control systems are ineffective before EAs ascertain the problems in the external audit at the end of a year.

In this regard, Munsif, Raghunandan and Dasaratha (2013) examined the early warnings of internal control problem before year-end external audit. In the US, Section 404 of SOX comprises of two parts. Section 404(a) mandates managers to provide an assessment about the efficacy of internal controls over financial reporting, whereas Section 404(b) requires EAs to express their opinion on such internal controls. Section 302 of SOX requires that the CEO and CFO certify each quarter about the significant deficiency of internal controls.

However, it is assumed that the problems disclosed in Section 404 filings (based on the year-end evaluation) were also confronted earlier on in the year, and that it is unlikely that an internal control problem suddenly occurs at the end of a year. They compared the characteristics of companies with and without prior warning in the form of Section 302 disclosures in previous quarters of the same fiscal year. Data were collected by using Section 404 reporting in order to identify whether companies had internal control weaknesses at year-end. Eventually, they found 305 observations in 2017 and 296 observations in 2018.

If one or more of the material weaknesses disclosed in the Section 404 report were also mentioned in at least one of the Section 302 reports, then it can be inferred that prior warning existed. They stated that a diligent AC should have more meetings to discuss issues about the detection of internal control weaknesses, so that a company is more likely to have early warning disclosure. A dependent variable takes on a value of 1 if one or more internal control weaknesses disclosed in Section 404 reports also found mention in Section 302 filings made in the quarterly reports filed in the previous quarters of the same fiscal year, otherwise 0. They measured AC diligence as the number of AC meetings that occurred in a year. After controlling for the effects of litigation risk, company's equity and debt issuance, auditor choice, first year audit engagement, nonaudit fee ratio, duality of CEO and chairman, the CFO's tenure and the number of material weaknesses, the authors noted that early warning was more likely for firms with a large AC and more frequent AC meetings.

Mohammad (2018) investigated the AC characteristics and its influence over financial restatement in Malaysia. The author stated that AC meetings allow directors to discuss issues pertaining to management monitoring and strategy implementation. In addition, higher AC meeting frequency may allow the directors to discuss issues about remedying weaknesses in internal control and risk management procedures. Consequently, AC meetings should allow ACMs to perform their oversight role and reduce financial restatement. Data were collected from the firms listed on the Bursa Malaysia Stock Exchange for 2008 and 2009. This study used the match-pair process wherein a control group sample was created. They found 350 firms with restatements and 350 firms with non-restatements from 2008 to 2009, respectively. This control group included companies that did not restate their annual reports, was of a similar size to that of the matched restated companies, and were listed on the same Bursa Malaysia board in the same industry. The final sample had a total of 700 firms. The dependent variable was measured as the occurrence of financial restatement. They measured AC diligence as the number of AC meetings per year. After controlling for the effects of leverage, number of subsidiaries, percentage of foreign subsidiaries, board characteristics and market-to-book ratio, they observed that its independence, size, meeting and expertise negatively related to financial restatements. However, this study ignored the effects of managerial ownership on financial restatements. Managerial ownership aligns the incentives of management with those of shareholders. If managers have ownership, they are more likely to make decisions in the best interest of shareholders (Owens-Jackson, Robinson and Shelton, 2009).

Owens-Jackson, Robinson and Shelton (2009) examined the effects of AC characteristics on managerial ownership and fraudulent financial reporting. They stated that if an AC is effective, it may effectively oversee financial statements prepared by the managers. This implies that fraudulent reporting is unlikely to occur. The sample included 50 fraud firms and 50 non-fraud firms. The dependent variable was measured as whether there is fraud litigation. The independent variables included AC characteristics and managerial ownerships. AC characteristics were recognized as AC independence, financial expertise, diligence and directorships. They measured AC diligence as the number of meetings held during a year. After controlling for the effects of board tenure, leverage, firm size, change in sales and auditor choice, they found that the likelihood of fraudulent financial reporting negatively related to AC independence and number of meetings They also observed that the probability of fraudulent financial reporting negatively related to the level of managerial ownership as well as the number of AC meetings as long as an AC remains completely independent.

Table 5 highlights prior studies about AC diligence and audit quality in the literature.

Authors	Measure of Diligence	Results
Soliman and Ragab	Diligence was measured as	AC independence, AC financial ex-
(2014)	number of AC meetings	pertise and AC meetings negatively
		related to earnings management.
Alzeban and Sawan	Diligence was measured as the	Frequent meetings between the AC
(2015)	number of meetings between	and CAEs positively related to the
	ACMs and CAEs.	perceptions of the effectiveness of
		implementations.

# Table 5: AC Diligence

Lary and Taylor	Diligence was measured in	An AC which had at least three
(2012)	terms of whether AC had at	members and four meetings negative-
	least three members and four	ly related to non-audit fees ratio.
	meetings	
Zaman, Hudaib and	Diligence was measured as the	AC effectiveness, independence, dili-
Haniffa (2011)	number of AC meetings	gence and size positively related to
		natural logarithm of audit fees.
		They also noted that AC effective-
		ness, AC independence and financial
		expertise negatively related to non-
		audit service fees, but AC size posi-
		tively related to them.
Munsif, Raghunan-	Diligence was measured as the	Early warnings were more likely for
dan and Dasaratha	number of AC meetings	firms with more frequent AC meet-
(2013)		ings.
Mohammad (2018)	Diligence was measured as the	AC independence, size, meeting and
	number of AC meetings	expertise negatively related to financial
		restatements.
	1	1

Owens-Jackson,	Diligence was measured as	The likelihood of fraudulent financial
Robinson and Shel-	number of AC meetings	reporting negatively related to AC
ton (2009)		independence, meetings and manage-
		rial ownership positively related to
		firm size and change of sales.
		The likelihood of fraudulent financial
		reporting given a totally independent
		AC negatively related to the level of
		managerial ownership and the num-
		ber of AC meetings.

In summary, the prior studies suggest that a diligent AC should spend more time and resources discussing financial reporting and internal control matters, audit scope, audit process, appointment of EAs and determination of the appropriateness of audit fees in order to enhance audit quality. The researcher expects a positive relationship between AC diligence and audit quality, so the beta-coefficient is expected to be positive. The null hypothesis to be tested is stated as follows:

H3: There is a negative relationship between the diligence of an audit committee and audit quality.

#### **3.5 Audit Committee Expertise**

We now turn to the fourth potentially relevant characteristics of ACs: their expertise. ACs must also have the desired expertise to oversee auditing and financial reporting processes in order to constrain earnings management (Ho, Liu and Wang, 2014; Rickling, 2014; Dhaliwal, Naiker and Navissi, 2010; Naiker and Sharma, 2009).

The UK Corporate Governance Code (2012, pp.6) stated that ACMs should have expertise to fulfil the duties of an AC:

"The board and its committees should have the appropriate balance of skills, experience, independence and knowledge of the company to enable them to discharge their respective duties and responsibilities effectively".

Although expertise entails many definitions, Securities and Exchange Commission (SEC) gave a tentative definition of a financial expert on October 22, 2002. The Commission (2002, p.790) stated:

"A financial expert can be identified to be someone who has, through education and experience as a public accountant, auditor or a principal financial officer, or controller, or principal accounting officer of an issuer, or from a position, been involved in the performance of similar

# functions":

- 1. An understanding of generally accepted accounting principles and financial statements;
- 2. Experience in the preparation or auditing financial statements of generally comparable issuers and the application of such principles in connection with accounting for estimates, accruals, and reserves;
- 3. Experience with internal accounting controls; and an understanding of the audit committee functions.

NYSE and NASDAQ mandated that at least one member must have accounting or financial management expertise through experience or education (Deloitte, 2012). On the other hand, Higgs Report (2003) and Smith Report (2003) suggested that an AC should have at least one member with significantly relevant and recent financial experience, which is inclusive of the experience of being an auditor or a finance director of a listed company. Hong Kong Institute of Certified Public Accountants (2013a) recommended that an AC should have at least one member with appropriate professional qualifications or accounting or related financial management expertise.

Prior studies investigated the relationships between AC expertise and the effectiveness of their oversight role in monitoring financial reporting and audit quality. For instance, Lin, Liu and Wang (2009) found that AC expertise was associated with lower levels of earnings management.

They investigated whether the regulations and recommendations in China and Hong Kong have been effective in regulating the quality of reported earnings. They selected a sample of firms from 2004 to 2008 and compared the sample of 208 HKEX listed companies to 208 Chinese firms that were only listed on the Shanghai or Shenzhen stock exchanges. The level of earnings management was measured as discretionary accruals estimated by modified Jones model. After controlling for the effects of returns on assets, book to market value, total assets, industry type and year, they found that AC independence, expertise and size were important factors in reducing earnings management. They also observed a positive relationship between the presence of government officials on the AC and earnings management. However, they did not find a significant relationship between the AC characteristics and earnings management for Chinese firms that were only listed on the Chinese domestic Stock Exchange.

The effects of AC expertise on earnings management can be evaluated in connection with family control. Strong family control may be able to reduce the effects of oversight role of the AC on earnings because family firms may appoint ACMs owing to the relationship with family members on the board (Wong, 2011). Despite their expertise, ACMs may be unable to challenge the quality of the reported earnings because they are appointed due to their relationship with the family members. They may choose to protect the interests of the family members instead of stakeholders. Consequently, it may be more probable that earnings management will occur. Wong (2011) conducted a study in Hong Kong in order to examine the effects of AC characteristics and family control on earnings management after the listing rule was revised on 31 March

2004.

He selected a sample from 2004 to 2008 with 385 firms listed in the mainboard in Hong Kong, finding 1,540 firms-year observations. They found that AC financial expertise was a significant factor in lowering earnings management. This was not the case with AC independence and diligence. In addition, family firms had ACMs with lower levels of independence and financial expertise. However, no evidence was found that family control moderated the relationships between AC characteristics and earnings management. The drawback of Wong (2011) study is that it ignored the effect of industry experts on an AC. Industry experts should have a better understanding of the effectiveness of internal control as well as auditing process within a specific industry.

Since financial statements include different estimates reflecting the complexities of business environment and industry, industry expertise helps an AC evaluate the accuracy of industryspecific estimates (Cohen, Hoitash and Krishnamoorthy, 2014). Therefore, an AC with industry experience and financial expertise should be more competent to monitor financial statements and audit quality than his or her counterpart without any industry experience. Cohen, Hoitash and Krishnamoorthy (2014) contended that an AC with industry expertise better understands the inherent risks and intricacies in the industry, so they are able to communicate more effectively with EAs. They are also more likely to understand the nature and extent of audit process within a specific industry. Therefore, the monitoring of the quality of external audits may be effective, eventually leading to higher audit quality.

Cohen, Hoitash and Krishnamoorthy (2014) evaluated the effects of AC industry expertise on the effectiveness of the AC in overseeing the financial report and auditing process. The final sample had 18,564 firm-year observations from 2001 to 2007. The occurrence of financial restatements and discretionary accruals estimated using a variant of modified Jones model (Kothari, Leone and Wasley, 2005) were regressed on the proportion of ACMs with industry experience. It was found that ACMs performed better to reduce restatement and discretionary accruals if they are industry and accounting experts, thereby indicating that industry and accounting expertise was important for the purpose of enhancing audit quality.One caveat is that this study did not control for the effects of ACMs' power which is reflected in ACMs' status in examining the relation-ships between earnings quality and ACM's expertise.

If an AC has a higher status than managers, it may influence how managers view the AC because its status enhanced the perception of their ability and authority (Badolato, Donelson and Ege, 2014; Pollock et al., 2010). Moreover, a higher status AC could seek more information because the AC is perceived to be more respected and may exhibit greater willingness to investigate potential problems by potentially challenging managers more than a low status AC (Badolato, Donelson and Ege, 2014). Badolato, Donelson and Ege (2014) examined the effects of financial expertise and status of AC on earnings management. They measured the status of ACs and managers using contemporaneous public board directorships, contemporaneous private board directorships and degrees from elite institutions. A value of 1 was assigned if the number of public board directorships on AC was found to be higher than the sample median, otherwise 0. The same method was adopted for contemporaneous private board directorships and degrees from elite institutions as well and also to measure managers' status. Thereafter, the authors assigned a value of 1 if the sum of the value assigned for contemporaneous public board directorships, private board directorships and degrees from elite institutions is three, otherwise 0.

Subsequently, an indicator was created to denote whether the AC has a higher score than managers. If that is the case, the indicator will assume a value of 1, otherwise 0. The data was collected from 2001 to 2008, and the final sample had 29,073 firm-year observations. Earnings management was measured as discretionary accruals estimated by modified Jones model. After control-ling for other AC and board characteristics, institutional ownership, leverage and return on total assets, they observed that ACs have both financial expertise and high relative status to help deter earnings management. However, this study ignored whether ACMs have the specific task experience in monitoring particular accounting process. An ACM who may be strong at determining the fair value of a property may not be strong at determining the impairment of goodwill.

Shepardson (2018) examined whether individual AC task-specific experience influences group financial reporting outcomes. She suggested that ACMs who have task-specific experience may have more experience in curtailing managerial bias. Task-specific experience was measured in terms of whether ACMs had the experience of monitoring goodwill write-offs in other firms. Fi-

nancial reporting outcomes were measured in terms of whether the sampled company has goodwill impairment. She used goodwill write-off because of its possibility as a critical accounting estimate that must be discussed with the AC. She identified ACMs of the firms with goodwill balances from 2004 to 2014. Thereafter, she identified each firm with recorded goodwill with which the ACMs were associated from t-1 to t-3, either as an ACM, CEO or CFO. Prior three years were used to ensure that economic conditions were similar. They found 15,038 firm-year observations. After controlling for the effects of the history of goodwill write-offs, firm size, leverage, AC directorships, financial expertise and size, auditor choice, returns on assets, duality and board size, they found that ACMs with goodwill write-off experience did enhance their oversight role of financial reporting by identifying goodwill impairments and requiring managers to write off goodwill in the firm.

In an interview, Sulaiman (2017) explored the effects of the AC on audit quality to provide insights into the conduct of the AC in audit quality and elements that affect the effectiveness of its oversight. He asked one question that is relevant to the current study: what are the critical elements affecting the effectiveness of the AC oversight of audit quality? To answer this question, they collected data using semi-structured interviews with ACMs and audit partners; 11 audit partners and 11 ACMs participated in this study. Thematic analysis was used to generate the themes following the interviews.

According to their findings, both auditor partners and ACMs perceived that the effectiveness of

AC oversight on audit quality is affected by knowledge and understanding of the chairman in auditing, financial reporting and the clients' business. They also found that AC is predicated on the work of EAs, particularly their expertise and knowledge. This suggested the important role of the external audit function as part of the resource components for the AC in pursuing its oversight role. Further, his study suggested that an AC's efficacy is influenced by the quality of their relationships. The participants concurred that the interactions and communication between EAs and ACMs have become far more frequent over the past few years. To illustrate, interactions occur between the chairman of the AC and EAs beyond the formal regular meetings. The ACMs perceived that the continuous discussion occurring during informal interactions plays an important role in building trust with EAs that reassures them about the quality of the audit work. They concurred that informal process is important for them when it comes to discussing difficulties encountered during the external audit and other sensitive concerns that cannot be touched upon in formal meetings.

Some partners explained that although they have more effective communications with ACMs, it may not necessarily enhance the audit quality because ACMs do not always want to discuss and decipher the accounting or auditing issues that pose challenges to EAs. They opined that this stems from the limited understanding of the ACMs in technical auditing and accounting knowledge. They added that the current financial reporting becomes more complex and that the AC may lack sufficient skills or training on these subjects. This, in turn, may cause misunderstanding between EAs and ACMs, thus affecting audit quality.

Table 6 highlights prior studies about AC expertise and audit quality in the literature.

 Table 6: AC Expertise

Authors	Measures of Expertise	Results			
Lin, Liu and Wang	AC expertise was measured as the	AC financial expertise reduced			
(2009)	financial expertise on an AC.	earnings management. There was			
		a positive relationship between			
		the presence of government offi-			
		cials on the AC and earnings			
		management.			
Wong (2011)	AC expertise was measured as the	AC competence was a significant			
	financial expertise on an AC.	factor in reducing earnings man-			
		agement. Family firm had ACMs			
		with less independence and finan-			
		cial expertise.			
		However, they did not find any			
		evidence that family control mod-			

		erates the relationships between				
		AC characteristics and earnings				
		management.				
Cohen, Hoitash and	AC expertise was measured as the	ACMs performed better to reduce				
Krishnamoorthy	proportion of ACMs with industry	restatement and discretionary ac-				
(2014)	experience as well as the propor-	cruals if they are industry and ac-				
	tion of ACMs with accounting ex- counting experts.					
	pertise.					
Badolato, Donelson	Contemporaneous public board	ACs who had the financial exper-				
and Ege (2014)	directorships, contemporaneous	tise and high relative status may				
	private board directorships and	be more effective to deter earn-				
	degrees from elite institutions	ings management.				
Shepardson (2018)	AC expertise was measured as	ACMs with goodwill write-off				
	ACMs' task-specific experience	experience enhanced their over-				
	(goodwill impairment)	sight role of financial reporting				
		by identifying goodwill impair-				
		ments and requiring managers to				
		write off goodwill.				

Sulaiman (2017)	ACMs' knowledge of business	Effective oversight of audit quali-
	operation, experience, accounting	ty of AC was influenced by the
	and auditing expertise	knowledge and understanding of
		the chairman concerning auditing,
		financial reporting and the clients'
		business

According to prior studies, if ACMs have the necessary financial expertise, an AC may possess greater knowledge to fulfil its oversight role. Therefore, the researcher expects a positive sign of co-efficient between audit quality and AC financial expertise. The null hypotheses are stated as:

H4: There is a negative relationship between AC financial expertise and audit quality.

## **3.6 Audit Committee Directorships**

In addition to the four characteristics discussed above, ACMs should have sufficient experience so as to make their monitoring efficacious. They should also not be too busy performing their oversight role. Therefore, we turn to the fifth characteristic: their directorships. If ACMs have more directorships, they should be more experienced in monitoring the financial reporting process and audit processes (Rickling, 2014; Kang and Kim, 2011; Alkdai and Hanefah, 2012; Frye and Wang, 2010; Ahn, Piraporn and Kim, 2010; Sarkar and Sarkar, 2009). However, it is argued that if they have an unusually high number of directorships, they may be too busy performing their oversight role in all the firms (Rickling, 2014; Dhaliwal, Naiker and Navissi, 2010; Habbash, Sindzingue and Salama, 2012; Sharma and Iselin, 2012). Therefore, ACMs may actually reduce their oversight effort.

The first stream of the research agreed that ACMs with more directorships may enhance audit quality. In a study relating to AC characteristics and audit fees in regulated industries, Boo and Sharma (2008) claimed that audit fees can be used as a proxy for external auditing efforts and in effect, audit quality. If audit firms put in additional efforts in an audit, it is only natural that the audit quality should improve. They observed the relationships between AC characteristics and audit fees in regulated industries, so as to provide evidence on the nature of the relationships between the following monitoring mechanisms: the board, ACs, EAs and regulators.

They contended that regulatory oversight may weaken the relationships between AC multiple directorships and audit fees because regulatory oversight for external auditing substitutes for external audit efforts. They also argued that ACs with more directorships in regulated companies have greater incentives to protect their reputation and they can attain this objective by demanding additional assurance from EAs, so that audit fees are increased because they demand more external audit efforts.

The sample had the firms with total assets exceeding USD 1 billion in the financial year. Larger companies were selected because they were highly scrutinised by government; 252 regulated firms which had 32 utilities and 220 bank and 217 non-regulated firms, were also found in the S&P 500 index. Audit fees were regressed on total assets, number of subsidiaries, ratio of foreign subsidiaries to total number of subsidiaries, number of business segments, board characteristics, indicator for regulated industry, profitability as well as AC characteristics, such as size, independence, average number of AC directorships and the frequency of interactions between regulated industry, independence, directorships and size. They observed that an AC with more directorships required more audit resources in a highly regulated industry. This implies that their directorships allow them to demand higher audit quality from EAs. However, this study did not investigate their efforts in retaining a high quality EA because by doing so, it may be able to provide more resources or expertise to a client in an external audit.

The second stream of research suggested that ACMs with too many directorships may be too busy performing their oversight role. Sharma and Iselin (2012) provided evidence to support this argument. Using an experimental study that compared two samples, they examined whether outside directorships renders ACMs too busy performing their oversight role; 191 firms with misstatements and 191 firms without misstatements were found by matching the year, industry, and size. The sample was collected in the US from 2001 to 2007. Misstatement was regressed in terms of whether they served on at least three other board seats, AC tenure, indicators for the financial year-end prior to July 2002, profitability, AC meetings, AC size, AC expertise and firm size. They observed that ACMs with multiple directorships were less effective in monitoring misstatement, implying that if they had more directorships - they may be too busy performing their oversight role, thereby affecting audit quality. However, this study ignored the effect of AC remuneration on audit quality. High AC remuneration may discourage ACMs to be critical of upward earnings management due to the fact that their remuneration is linked to a company's earnings.

Habbash, Sindzingue and Salama (2012) evaluated the effects of various AC characteristics on audit quality. AC characteristics were recognised as its independence, competence, outside directorships, shareholdings, frequency of meetings, size and remuneration. Audit quality was measured using performance-matched accrual measure (Kothari et al., 2005). Data were collected from the firms listed on FTSE 350 from 2006 to 2007. The final sample had 392 firm-year observations. AC characteristics were not found to significantly relate to unsigned discretionary accruals, but frequency of meetings and average AC remuneration was positively correlated with upward discretionary accruals. Meanwhile ACMs' accounting experience and average number of outside directorships were found to positively relate to downward discretionary. This was in consonance with the notion that busy directors were less effective in monitoring financial reporting and audit processes. The results were robust for the effects of the listing of FTSE 100, regulated industry sector, firm size, leverage, cash flow from operations as well as return on assets. However, this study regarded different types of directorships homogeneously. ACMs may be much busier if they serve as the AC chair or financial experts of other companies.

Tanyi and Smith (2015) investigated how the number of AC chair positions and other AC financial expertise positions held by the AC chairman and AC financial experts impacts their ability to oversee a company's financial reporting process. They suggested that serving as an AC chair and financial expert necessitates much time. If ACMs have too many directorships as AC chairs and financial experts for other companies, they may become too busy overseeing managers of a company, so they may capitalise on the opportunities to engage in earnings management. Tanyi and Smith (2015) collected the data from 2004 to 2008. The final sample had 6,535 firm-year observations. Financial reporting quality was measured as discretionary accruals estimated by modified Jones model adjusted for firm performance and Dechow-Dichev (2002) model. Moreover, it was measured as whether earnings met the forecast prepared by financial analysts. ACMs' busyness was measured as the number of other AC chair positions and other AC financial expertise positions held by the AC chairman. It was also measured as the average number of other AC chair positions and other AC financial expertise positions held by the AC financial experts.

After controlling for the effects of other AC characteristics, natural log of the market value of equity, number of business segments, leverage, operating cash flow, auditor choice and loss, they found a negative association between financial reporting quality and the number of other AC chair positions and other AC financial expertise positions held by the AC chairman or AC financial experts. Future research may investigate the impacts of other types of directorships or management positions held by ACMs in other companies on financial reporting quality. For example,

serving as a partner in accounting or law firm may make ACMs too busy performing oversight role in another company.

Table 7 below highlights prior studies about AC directorships and audit quality in the literature.

A /1		D 1				
Authors	Measures of AC Director-	Results				
	shins					
	ships					
Boo and Sharma	Directorships were measured	An AC with more multiple direc-				
	1	1				
(2008)	as average number of ACMs'	torships required more audit re-				
	outside directorships.	sources in highly regulated indus-				
		try.				
		uy.				
Sharma and Iselin	Directorships were measured	ACMs with multiple directorships				
	_					
(2012)	as average number of ACMs'	were less effective to monitor mis-				
	outside directorships	statomont				
	outside directorships.	statement.				
Habbash, Sindzingue	Directorships were measured	ACMs' accounting experience and				
	1					
and Salama (2012)	as average number of ACMs'	average number of outside direc-				
	outside directorships.	torships positively related to				
		downward discretionary.				
		as which and another binding.				
Dhaliwal, Naiker and	Multiple directorships were	AC accounting experts, who were				

**Table 7:** AC Directorships

Navissi (2010)	recognised as high or low	independent, had fewer director-			
	level.	ships and shorter tenures were			
		more effective to enhance accruals			
		quality.			
Tanyi and Smith	ACMs' directorships were	The number of AC chair positions			
(2015)	measured as the number of	and other AC financial expertise			
	AC chair position and other	positions held by the AC chairman			
	AC financial expertise posi-	or AC financial experts reduced			
	tions held by the AC chair-	financial reporting quality in terms			
	man. Their directorships were	of discretionary accruals and meet-			
	also measured as the average	ing analysts' forecast.			
	number of AC chair positions				
	and other AC financial exper-				
	tise positions held by the AC				
	financial experts.				

Prior studies suggested that if ACMs have more directorships, they may become more experienced in their oversight role, but busier performing their role. Therefore, the researcher expects the sign of co-efficient between audit quality and AC directorships not to be predetermined. The null hypothesis is stated as: H5: There is no relationship between AC directorships and audit quality.

### 3.7 Audit Committee Tenure

Having more directorships only indicates that ACMs have oversight experience in other companies, but the operations of other companies may be very different from those of a particular company. They may gain more knowledge and experience of monitoring financial reporting and audit process in a particular company over time, so longer AC tenure should enable them to enhance audit quality (Wilson, 2017; Chan, Liu and Sun, 2013; Aldamen et al., 2012; Ghosh, Marra and Moon, 2010; Yang and Krishnan, 2005). Long tenure ACMs may establish working relationships with managers so that they can obtain useful information for their judgments on accounting issues (Liu and Sun, 2010). They may have high reputation developed over time, so they are likely to ensure that they perform the job effectively to protect their reputation (Sun and Liu, 2010). However, long tenure ACMs may become familiar with managers, so their oversight role on managers may be impaired (Rickling, 2014; Singhvi, Rama and Barua, 2013; Vineeta and Errol, 2012).

The first stream of research agrees that long tenure ACMs may gain more knowledge and experience in monitoring audit quality of a particular company. For example, Chan, Liu and Sun (2013) examined the effects of AC and board tenure on audit fees. Data were found from the firms listed in the US from 2005 to 2006. 2,849 firm-year observations were found in their study. They observed that audit fees negatively related to the proportion of long board tenure directors on the independent AC, suggesting that long AC tenure increases audit quality, leading to reduced audit risk, so they lower audit fees to the clients. This result suggested that longer AC tenure enhanced ACMs' experience and knowledge in monitoring financial process and substituted for external audit effort. The study was robust for the effects of other board and AC characteristics, auditor characteristics, firm characteristics and the ratio of inventory to total assets. This study focused on the large firms listed in the US. Future study may be conducted on the effects of AC tenure on audit fees using small listed firms.

Wilson (2017) examined whether director tenure increases or decreases AC effectiveness. They suggested that ACMs with long tenure should have knowledge of the company's operations which enabled them to perform their oversight role effectively, but long-tenured ACMs may become familiar with managers, so they may not challenge financial reports prepared by managers. Hence, their effectiveness of the oversight role may be reduced. Data were randomly collected from 100 firms listed on the S&P 500 index and another 100 firms listed on Russell Microcap Index which consists of 2,000 of the smallest publicly held companies.

AC effectiveness was measured as the absolute value of discretionary accruals estimated by Jones model. If discretionary accruals are high, earnings management is likely to occur. Their tenure was measured as the proportion of ACMs with more than 10 years of service as a director. Another measure is whether there is at least one ACM has more than 10 years of services. After controlling for the effects of AC size, board independence, market-to-book ratio, leverage, firm size and their tenure, they found that discretionary accruals were negatively associated with the proportion of long-tenured ACMs. They also observed that the presence of even one long-tenured ACM reduces earnings management. Future research may use deferred tax expenses and special items which do not occur frequently in order to measure earnings management to increase the reliability of the measures of earnings management.

Ghosh, Marra and Moon (2010) examined the effects of AC characteristics on restraining earnings management in pre-SOX and post-SOX periods. AC characteristics were measured as its size, frequency of meetings, expertise, ownership and tenure. Earnings management was estimated using performance-adjusted Jones model, absolute value of deferred tax expenses and absolute value of special items. The data were collected from the firms listed on S&P 500, the Mid-Cap 400, and Small-Cap 600 in the US from 1999 to 2006. In this regard, Ghosh, Marra and Moon (2010) found 9,290 firm-year observations. They found that AC size, frequency of AC meetings and AC tenure were negatively associated with earnings management after controlling for the effects of board characteristics, growth of a firm, auditor choice and leverage. The strength of this association was weaker for the post-SOX years as compared to the pre-SOX years. However, this study only examined the effects of AC characteristics on earnings management using annual data, and managers can manipulate quarterly financial statements to meet the target because the quarterly financial statements are subject to less oversight. Due to the fact that quarterly financial statements are not generally audited and have less detailed disclosures as compared to annual financial statements, managers may find it easier to manipulate the quarterly numbers than annual numbers (Jeter and Shivakumar, 1999). Thus, fraudulent financial reporting often commences with quarterly misstatements (Yang and Krishnan, 2005). Yang and Krishnan (2005) investigated the effects of an AC on restraining quarterly earnings management. Earnings management was measured using discretionary accruals from Jones (1991) model and current accruals from the model adopted by Teoh, Welch and Wong (1998). AC characteristics were measured as its independence, number of meetings, financial expertise, stock ownership, directorships and tenure; 895 publicly firm-year observations were randomly collected from 1996 to 2000 in the US. They found that quarterly earnings management negatively related to ACMs' average tenure and positively related to their stock ownership after controlling for the effects of leverage, size of firms and unexpected earnings scaled by stock price at the end of the year. These results imply that although it is easier for managers to manipulate quarterly earnings, long tenure did allow ACMs to become more capable of overseeing earnings management. However, this study was conducted at a time when the economy was stable, so it did not provide insights into the effectiveness of an AC in adverse economic shocks.

During periods of adverse economic shocks, managers may find themselves under immense pressure to manage earnings upward in order to impress the investors. ACMs' oversight role becomes even more important in constraining earnings management during this period (Aldamen et al., 2012). Aldaman et al. (2012) investigated the effects of AC characteristics on firm performance during the Global Financial Crisis. They assessed the impacts of AC characteristics and their significant influence on a firm's financial and risk decision-making processes. In their study, AC characteristics were recognised as its size, independence, expertise, diligence, directorships and tenure. They argued that ACMs' tenure may allow them to gain more knowledge of a company but impair the independence of their oversight role. The data were collected from S&P 300 from 2008 to 2009. Two sub-samples of high and low-performing companies were identified by selecting the high and low 25 per cent performers from S&P 300 index. They found 120 firmyear observations. Firm performance was measured as the percentage change in share price from 2008 to 2009. After controlling for the effects of board characteristics, AC chair tenures, log of total assets, leverage as well as firm systematic risk measured as beta and industry, they observed that a longer tenured chair on the AC augments a company's performance.

Another stream of research argues that longer AC tenure may impair ACMs' objective oversight role because they become familiar with managers. Vineeta and Errol (2012) probed the effects of their multiple-directorships and tenure on financial misstatements. Data were collected from the firms listed in the US with misstatements and those without misstatements from 1999 to 2006 to compare their respective performances. They found 191 firms with misstated financial statements and those without misstated financial statements, and observed that AC tenure and multiple-directorships positively related to financial misstatement, indicating that the AC tenure may impair their objective oversight role and more directorships may reduce their effort to monitor

financial reporting and audit processes, leading to reduce audit quality. This study was robust for the effects of other AC characteristics, firm size, the indicator that the year-end of firms was prior to July 2012, profitability and leverage. Nevertheless, it ignored the effects of ACM departure on market reaction. If the market perceives that short-tenured ACMs are effective in monitoring audit quality, their departure from the company may impel investors to react negatively (Singhvi, Rama and Barua, 2013).

Singhvi, Rama and Barua (2013) examined the effects of the characteristics of ACMs who departed from the firms on market reactions. They collected the data from firms with AC director department from January 2005 to December 2008 and found 107 firm-year observations in the US. The authors suggested that long tenure may lead to better knowledge of the company and perhaps result in enhanced monitoring. However, the ACMs may also become less independent by becoming more familiar with managers, implying that their oversight effort may be reduced.

They began with a list of ACM departures from 2005 to 2008. They had 107 firm-year observations. Market reactions were measured as cumulative abnormal returns measured using the eightday window. ACMs' tenure was measured in terms of three levels. ACMs' tenure was deemed short if the tenure of the departing ACM is three years or less. However, it is long if it is at least seven years. After controlling for the effects of natural log of market value, leverage, and return on assets and market-to-book ratio, they observed that the market reacted significantly negatively to the departure of short tenured directors, but not for that of long-tenured directors. As an implication, investors do perceive that short-ternured ACMs may be more independent to oversee managers, which implies that short-tenured ACMs may provide high quality monitoring.

Rickling (2014) investigated the effects of ACMs' tenure and directorships on meeting analysts' forecast. Managers may manage earnings to meet analyst forecast because share price may decrease when earnings are lower than forecast. The author argued that a long-tenured AC may not be effective in tracking earnings management because they may become closely affiliated with managers, so they are less likely to challenge managers' decisions. They collected data from 2005 to 2007. The sample had 3,157 firm-quarter observations; an indicator was used to measure whether earnings were managed in order to meet analysts' forecast. If actual earnings reported exceed the forecast by one cent per share or less, a value of 1 would be assigned to the indicator, otherwise 0. AC tenure was measured as the ratio of the number of members serving on the AC for more than seven consecutive years as of 2007. After controlling for the effects of the square roots of the number of ACMs, financial experts on an AC and AC meetings, forecast dispersion calculated as the standard deviation of earnings forecast, market-to-book ratio, log of market value of equity, auditor choice and litigation risk, the authors observed that long-tenured ACs and ACMs' directorships had positive relationships with the likelihood that a firm just meets analyst forecast.

Table 8 highlights prior studies about AC directorships and audit quality in the literature.

# Table 8: AC Tenure

Authors	Measure of AC Tenure	Results
Chan, Liu and Sun (2013)	AC tenure was measured as	Audit fees negatively related
	the proportion of long-tenured	to the proportion of long-
	directors on the independent	tenured directors on the inde-
	AC	pendent AC.
Wilson (2017)	AC tenure was measured as	Discretionary accruals were
	the proportion of ACMs with	negatively associated with
	the board tenure of 10 or	the proportion of long-
	more years or whether at least	tenured ACMs. The presence
	one ACM has tenure of more	of even one long-tenured
	than 10 years.	ACM reduced earnings man-
		agement.
Ghosh, Marra and Moon	AC tenure was measured as	AC size, frequency of AC
(2010)	the number of years the direc-	meetings and AC tenure were
	tors served as ACMs of a	negatively associated with
	company.	earnings management.
		Earnings management was
		measured as performance-

Yang and Krishnan (2005)	AC tenure was measured as the number of years the direc- tors served as ACMs of a company.	adjusted Jones model, abso-lute value of deferred tax ex-penses and absolute value ofspecial items.Quarterly earnings manage-ment negatively related toACMs' average tenure. Earn-ings management was meas-ured using discretionary ac-cruals from Jones (1991)model and current accrualsfrom Teoh, Welch and Wong
Aldaman et al. (2012)	AC tenure was measured as	(1998) model. A long-tenured chair on the
	the number of years AC chair served on the board	AC enhanced market perfor- mance measured by the change of share price during
Singhvi, Rama and Barua	AC tenure was measured as	Global Financial Crisis. Abnormal returns were nega-

(2013)	the number of years the direc-	tively associated with the de-
	tors served as ACMs of a	parture of accounting experts
	company.	and short-tenured directors.
Vineeta and Errol (2012)	AC tenure was measured as	AC tenure and multiple-
	the number of years the direc-	directorships positively relat-
	tors served as ACMs of a	ed to financial misstatement.
	company.	
Rickling (2014)	AC tenure was measured as	AC tenure was positively as-
	ratio of the number of mem-	sociated with the likelihood
	bers serving on the AC for	that a firm just meets analyst
	more than 7 consecutive years	forecast.
	as of 2007.	

Prior studies provided evidence that if ACMs have longer tenure, they may become more experienced in their oversight role because they may better understand the operations of a company, although they may also become less objective. For this reason, the researcher suggests that the sign of co-efficient between audit quality and AC tenure cannot be predetermined. The null hypothesis is stated as:

H6: There is no relationship between average AC tenure and audit quality.

#### **3.8 Audit Committee Age**

We now turn to the ACMs' last characteristic: age. Older ACMs may contribute to higher audit quality and are more concerned with their reputational and litigation risk. Since they have fewer career mobility options, they may put in more efforts in monitoring financial reporting and audit processes (Dao, Huang and Zhu, 2013; Huang, Green and Lee, 2012; Van der Zahn, Harjinder and Inderpa, 2008). Furthermore, older directors have more knowledge and experience to fulfil their oversight role (Mustafa, Che-Ahmad and Chandren, 2018).

Dao, Huang and Zhu (2013) suggested that cost of capital, a proxy for perceived audit quality, is negatively associated with ACMs' average age because older ACMs may be more risk-averse, so they may be able to work more diligently to monitor financial statements as well as audit process to safeguard their reputation. They collected the data of firms listed in the US. The sample had 1,733 firm observations from 2007 to 2009. The authors estimated the cost of capital using Easton (2004) price-earnings growth method. They noted that their average age negatively related to the cost of capital after controlling for the effects of firm specific characteristics, auditor type and board and AC characteristics. One limitation of the study conducted by Dao, Huang and Zhu (2013) is that risk-aversion may relate more to personality rather than age. For instance, some young individuals may be even more risk-averse than their older counterparts. Risk-aversion is shaped by the environment around them, their friends and families.

Unlike Dao, Huang and Zhu (2013), Jintawattanagul (2015) noted that ACMs' age was positively associated with cost of capital and accrual quality. He examined whether AC characteristics had a significant impact on cost of capital and accrual quality and whether high accrual quality lowered the cost of capital. AC characteristics were recognised as its independence, size, meeting frequency, gender, tenure, number of directorships and legal and accounting expertise.

He posited that older ACMs have more experience in identifying internal control weaknesses and are more conservative than younger ACMs, so they may be more diligent in preventing any nefarious collusion between managers and EAs. If so, managers may find it more difficult to manipulate earnings and investors may perceive that audit quality should be higher. They claimed that if the accrual quality is high, investors may perceive that the earnings should have less risk, thereby reducing the cost of capital. Hence, ACMs' age should have positive effects on accrual quality and negative impacts on the cost of capital. They used capital asset pricing model (CAPM) to estimate the cost of capital and the Dechow and Dichev (2002) model to estimate accrual quality. Data were collected from the firms listed on the Stock Exchange of Thailand (SET) from 2010 to 2012. ACMs' age was measured as the total age of ACMs on an AC. Interestingly, they observed that ACMs' age positively related to cost of capital and accrual quality. The results were found to be robust for the effects of log value of market value of equity, leverage, auditor choice and book-to-market ratio. The findings imply that although older ACMs may enhance the accrual quality by providing more oversight effort, they are perceived to increase the

risk of a company. This may be attributed to the perception that older ACMs may experience difficulties in keeping abreast with new company or technology-related advancements.

Qi and Tian (2012) examined the effects of ACMs' personal characteristics such as their age, gender diversity and education on firms' earnings management. They hypothesised that their age negatively relates to earnings management because people's age can be regarded as a proxy for their experience and resistance to risk-taking. Earnings management was measured as discretionary accruals estimated by modified Jones model. They found all Chinese listed firms from 2004 to 2010. The final example consisted of 8,148 firm-year observations. According to the authors, ACMs' age, gender diversity and education level negatively related to earnings management after controlling for the effects of their financial work experience, AC size, AC independence and number of AC meetings, firm size, book to market ratio, financial leverage and sales growth. These results indicate that personal characteristics such as age may help enhance audit quality, thus constraining earnings management.

Huang, Green and Lee (2012) examined the linkage between the CEO's age and financial reporting quality. ACMs' age was a control variable in their study. They stated that individuals become more ethical and conservative when they become older. This means that older CEOs are less likely to engage in aggressive earnings management and are therefore, more likely to be associated with higher quality financial reporting. Thus, a company is less likely to have financial restatements or just meet analyst earnings forecast. The dependent variables are an indicator that showed whether a firm just met the mean consensus forecasted by the analysts and an indicator that revealed whether a company had an accounting restatement and an adverse opinion.

CEO age was measured as whether it was greater than or equal to 62. ACM's age was measured as average age of ACMs. Data were collected from firms listed in the US from 2005 to 2008. The sample contained 2,402 firms. After controlling for the effects of CEO tenure, market-to-book ratio, return on total assets, block shareholdings, firm age, loss, earnings price ratio, material internal control weaknesses, board independence, board size and other AC characteristics, they observed that CEO age was negatively associated with firms meeting or beating analyst earnings forecast and financial restatement. However, such a linkage was not established with ACMs' age.

In contrast, Obermire (2016) observed that ACMs' age helped reduce financial restatements. Obermire (2016) examined whether ACMs' social identities were associated with ACMs' oversight quality. To begin with, she conducted an interview to explore the social identities which may impact ACMs' oversight quality, after which she performed a regression analysis on the relationships between their social identity and oversight quality. ACMs' average age was a control variable in the regression model. These interviews were conducted with 26 ACMs. The respondents stated that ACMs' public accounting social identity provides them with extensive experience monitoring financial reporting. Their investment management social identity provides them with extensive experience reviewing and interpreting financial statements, but one respondent suggested that as investors of other companies, ACMs may have minimal focus on financial reporting rules and requirements. Their financial management identity may cause them to be lenient on CFO because the respondents claimed that they would better understand the pressure facing CFOs. However, some respondents observed that their financial management identity provided them with greater financial expertise of overseeing financial reports. Their executive management identity may lead them to be more likely to identify with management, thereby reducing their oversight quality.

Obermire (2016) attempted to examine the relationships between social identities and oversight quality suggested by the respondents. The author regressed ACMs' social identity on oversight quality. Dependent variable was measured as whether a company had a financial restatement within five years of IPO. Independent variables were ACMs' social identities that were recognised as public accounting, executive management, financial management and investment management social identities. Public accounting social identities were measured as the proportion of ACMs who served as audit partner or partner in public accounting firm, executive management social identities as the proportion of ACMs who served as CEO, president and other executive, financial management identity as the proportion of ACMs who served as CFO or Vice President of Finance and investment management identity as the proportion of ACMs with experience of private equity, venture capital and investment banking.

Data were collected from 2005 to 2009; 293 firms were found. Out of these, 83 restatement periods were found. The final sample had 1,389 firm-year observations, including both restatement periods and non-restatement periods. They noted that financial management social identities positively related to financial restatements, but investment management identities negatively related to financial restatements. ACMs' average age was found to negatively relate to financial restatements. These results were robust for other AC characteristics, board characteristics, auditor choice, auditor change, merger and acquisition, loss, leverage and log value of market value of equity.

Yasser and Mamun (2015) examined the effects of AC characteristics on firm performance in Pakistan. They suggested that an effective AC can help improve the transparency of earnings and audit process. Data were collected from 480 firms listed in Pakistan in 2013. This year was chosen because the Code of Corporate Governance was revised in 2012. The oversight role of ACMs has been strengthened. One of the measures used as proxies for firm performance was Tobin's Q. AC characteristics were recognised as AC independence, the number of AC meetings, AC chairman age, the number of ACMs on an AC, block holding representation on an AC, AC expertise, AC gender and other AC characteristics. After controlling for the effects of firm age, leverage and log value of total assets, they observed that AC chairman age, chairman qualification and chairman financial expertise positively related to Tobin's Q. These results imply that the age of AC chairman improves the perception of oversight quality on the transparency of earnings and audit process because older AC chairman may have more experience as well as expertise in overseeing earnings and audit quality. Older AC chairman may also have fewer career options, so they would be more careful about performing their oversight role in financial reporting and audit quality.

Table 9 highlights prior studies about AC age and audit quality in extant literature.

Author	Measures of AC Age	Results		
Dao, Huang and Zhu (2013)	Average ACMs' age	ACMs' average age negative-		
		ly related to cost of capital.		
Jintawattanagul (2015)	Total age of ACMs on an AC	ACMs' age positively related		
		to cost of capital and accrual		
		quality.		
Qi and Tian (2012)	Average ACMs' age	ACMs' age, gender diversity		
		and education level negative-		
		ly related to earnings man-		
		agement.		
		Earnings management was		
		measured as discretionary		

		accruals estimated by modi-
		fied Jones model.
Huang, Green and Lee	Average ACMs' age	ACMs' age was not signifi-
(2012)		cantly associated with finan-
		cial reporting quality meas-
		ured by firms just meeting or
		beating analysts' forecast nor
		financial restatements.
Obermire (2016)	Average ACMs' age	ACMs' age negatively relat-
		ed to financial restatements
		within five years of IPOs.
Yasser and Mamun (2015)	AC Chairman's age	AC Chairman's age positive-
		ly related to Tobin's Q.

Prior studies largely provided credible evidence that older ACMs may be encouraged to perform their oversight role. Therefore, the researcher expects a positive sign of co-efficient between audit quality and average AC age. The null hypothesis is stated as:

H7: There is a negative relationship between AC age and audit quality.

# **3.9 Chapter Summary**

This chapter discusses seven AC characteristics (size, independence, diligence, expertise, directorships, tenure and age) and their expected effects on audit quality. There is significant evidence to suggest that a large and independent AC with financial expertise is more effective in improving audit quality. Older ACMs may also help improve audit quality, but long-tenured ACMs with many directorships may have significant impacts on audit quality, although the directions remain uncertain. Seven hypotheses were formed by drawing observations from the literature reviewed in this chapter in establishing an academic rationale to answer Research Question 1 that was stated in Chapter 1.

# CHAPTER 4 RESEARCH METHODS (ARCHIVAL MODELLING STUDY)

## **4.1 Introduction**

This chapter provides justifications for the use of the archival research method. Once it is outlined, the justification for the choice of sample and principal data sources for the study are explained. Since this is an archival modelling study, a significant portion of this chapter provides discussions on identifying and justifying the dependent as well as independent variables used in the subsequent analysis. The chapter elaborates on how the dependent variable, audit quality, is measured. The definitions and measurement of independent variables, such as AC size, independence, expertise, diligence, directorships, tenure and age are also discussed. It also explains the regression models employed to examine AC characteristics and audit quality; key assumptions of regression models are also discussed in the chapter, which ends with a summary of the content.

### 4.2 Justification for the Use of Archival Research Method

To examine the relationships between AC characteristics and audit quality, the researcher used the archival modelling study. Archival research refers to seeking evidence or data from original archival records (Easterby-Smith, Thorpe and Lowe, 2012). Easterby-Smith, Thorpe and Lowe (2012) stated that there is copious amount of data in corporate governance as well as government reports. The statistical and financial database can be used to facilitate data collection. However, Saunders, Thornhill and Lewis (2008) stated that researchers may be constrained by the nature of administrative records and documents. For example, minutes of AC meetings are not made available for researchers because their disclosure is not legally mandated. Internal validity remains a concern because archival research relies on proxy variables to measure a concept; however, the fact remains that proxy variables are not equivalent to actual concepts. Consequently, the relationship between proxy variables and concepts may not be fully captured.

The researcher used this strategy because the objective of this archival modelling study is to examine the relationships between AC characteristics and audit quality, so archival research is suitable for collecting secondary data to examine these relationships. Secondly, it is the most economical and convenient strategy of data collection because the data of AC characteristics, audit quality and control variables can be found from archival records already existing in the annual report and the access to the data becomes easy because annual report is disclosed to the public.

#### **4.3 Sample Selection and Collection Procedures**

### **4.3.1 Sample Selection**

The researcher used secondary data which were drawn from the sample firms contained in Hong Kong Hang Seng Composite Index because it covered 95 percent of market capitalisation of listed companies (Hang Seng Indexes, 2018). The period of this study is from 2010 to 2015. The researcher used this period of time because to the best knowledge of the researcher, no study has been conducted to examine the relationships between AC characteristics and audit quality in Hong Kong in the aftermath of the financial crisis in 2008. An effective AC assumes even greater importance to constrain earnings management by enhancing audit quality after the financial crisis because managers are under immense pressure to manage earnings to demonstrate that the financial position and performance of a company continue to be strong.

The use of sample firms contained in the index allows the researcher to maximise data availability. In addition, the sample firms contained in the index follow the corporate governance recommended by Hong Kong Stock Exchange (HKEx) to similar levels. Small firms may not follow the corporate governance recommended by HKEx. Financial industries were excluded from the initial sample because their special accounting practices imply that the discretionary accruals model does not apply to them (Chtourour et al., 2008; Peasnell, Pope and Young, 2000). Missing corporate governance variables mainly are attributed to the lack of disclosure of AC and board meetings and pertinent information about ACMs' expertise and duality of CEO and chairman. Following the elimination, this study contains 1,714 firm year observations. Table 10 summarises the sample size and sample selection for the study period.

Description	2010	2011	2012	2013	2014	2015	Total
Initial sample	356	361	368	409	437	480	2,411
Excluded:							
Financial companies	(41)	(49)	(53)	(53)	(54)	(58)	(308)
Missing annual report or shorter than 12 months	(9)	(14)	(15)	(18)	(22)	(27)	(105)
fiscal year							
Missing corporate gov- ernance data	(16)	(24)	(26)	(25)	(28)	(37)	(156)
Missing financial data	(14)	(19)	(17)	(21)	(24)	(33)	(128)

**Table 10:** Sample Selection Procedure (Archival Modelling Study)

Final sample	276	255	257	292	309	325	1,714

#### **4.3.2 Data Collection Procedure**

Data on corporate governance variables were hand collected from 2010 to 2015 annual reports for each company. The researcher examined the directors' profiles and the corporate governance reports in order to identify AC and board characteristics and also collected financial data for control variables and calculation of discretionary accruals, proxy for audit quality from Datastream and annual reports.

#### 4.4 Statistical Method: Panel Data Regression

Panel data regression was used in the archival modelling study. Panel data refers to the data that are the observations of the same individuals or firms, albeit for varying periods of time (Wooldridge, 2003). Panel data regression has unobserved individual specific effects  $(a_i)$  which may not vary over time. If individual effects have a significant association with independent variables, OLS can be deemed invalid and panel data analysis should be used (Wooldridge 2003). Panel data regression is different from OLS in that panel data regression controls for the effects of the unobserved individual effects (Wooldridge, 2003). The panel data regression is explained as follows:

$$y_{it} = \beta_1 x_{it1} + \dots \beta_k x_{itk} + a_i + u_{it}$$
, for all t = 1, 2, ..., T

 $y_{it}$  = Dependent variable of observation *i* in time *t*   $x_{itk}$  = Independent variable *k* of observation *i* in time *t*   $v_{it} = a_i + u_{it}$   $\beta_k$  = Coefficient of independent variable *k*   $a_i$  = Specific individual effects of observation *i*  $u_{it}$  = Idiosyncratic error of observation *i* in time *t* 

The two forms of panel data regression include fixed effects panel data and random effects panel data. The differences between these two forms are discussed in Section 4.4.5. The assumptions of fixed effects and random effects regression are stated below:

The assumptions of fixed effects panel data regression:

FE1: E  $(u_{it} | x_i, a_i) = 0$ 

FE2:  $Var(u_{it} | x_i, a_i) = Var(u_{it}) = \sigma_u^2$ , for all t = 1, ..., T.

FE3: Cov 
$$(u_{it}, u_{is} | x_i, a_i) = 0$$

FE4: There are no perfect linear relationships among the explanatory variables.

The assumptions of random effects panel data regression:

RE1: in addition to FE1, E  $(a_1 | x_i) = 0$ 

RE2: in addition to FE2, Var  $(a_i|x_i) = \sigma_a^2$ 

RE3: Corr 
$$(v_{it}, v_{is}) = \frac{\sigma_a^2}{(\sigma_a^2 + \sigma_u^2)}$$
, for all  $t \neq s$ , where  $\sigma_a^2 = Var(a_i)$  and  $\sigma_u^2 = Var(u_{it})$ 

RE4: There are no perfect linear relationships among the explanatory variables.

Key assumptions of panel data regression are discussed in greater detail in the next section.

# 4.4.1 Key Assumptions of Regression Analysis

This section discusses the key assumptions of regression analysis. In case of their violation, the results may be biased or inefficient. Four key assumptions of regression analysis to be discussed include: multi-collinearity, independent error terms, heteroscedasticity and serial correlation. The findings of the tests of these assumptions are presented in Chapter 5 and Chapter 9 for the qualitative and archival modelling study, respectively.

#### 4.4.1.1 Multi-collinearity

Multi-collinearity pertains to the linkage between independent variables. Multi-collinearity refers to the predicament of high inter-correlations between independent variables (McClave, Benson, Sincich, 2011; Hair et al., 2010; Stevens, 1996). If multi-collinearity is present, it is more difficult to ascertain the effects of an independent variable due to the high correlation of independent variables (Hair et al., 2010). Multi-collinearity may cause a value of coefficient to have an opposite sign; hence the results may deviate from expectations (McClave, Benson, Sincich, 2011; Panik, 2009). Multi-collinearity leads to a significant change in the values of the previous coefficients after the addition of a new variable into the model (McClave, Benson, Sincich 2011; Panik, 2009). Further, a variable with significant effects on dependent variables becomes insignificant after the addition of a new variable into the model (McClave, Benson, Sincich. 2011; Panik, 2009). Multi-collinearity causes the failure to reject a false null hypothesis of the independent variable which has no significant impact on the dependent variable (Groebner et al., 2005).

Two methods can be used in order to detect multi-collinearity. The first method is to examine the correlations among independent variables from correlation matrix (Stevens, 1996). In this regard, Hair et al. (2010) stated that the problem of multi-collinearity occurs if correlations of independent-

ent variables are 0.9 or higher.

The second method is to examine the variance inflation factors (VIF) for independent variables (Stevens, 1996). VIF determines the presence of a strong linear association between an independent variable and all the remaining independent variables. It is possible for an independent variable to have only moderate or relatively weak relationships with other independent variables with regard to simple correlations, but still have a high R-square when regressed on all the other independent variables (Stevens, 1996). VIF is the inverse of tolerance value, which refers to the amount of variability of an independent variable that is not explained by other independent variables (Hair et al., 2010). VIF signifies a measure of how much variance of coefficients is increased by the relationship of one independent variable with other independent variables. If VIF is more than or equal to 10, the correlations between independent variables are extremely strong (Hair, 2010; Myers, 1990).

During the presence of multi-collinearity, highly correlated independent variables can be combined as an independent variable (Stevens, 1996), or one or more highly correlated independent variables may be dropped (Hair et al., 2010).

#### 4.4.1.2 Endogeneity

Detecting the presence of multi-collinearity only indicates the linkages between independent variables, but the relationship between independent variables and error terms remains nebulous. If the error terms are found to be associated with independent variables, endogeneity is present because of measurement error, simultaneous causality and omitted variables (Wooldridge, 2003). Simultaneous causality indicates that variables are co-determined (Wooldridge, 2003). If the error terms are correlated with independent variables, the estimates of the coefficients of regression are deemed biased (Wooldridge, 2003).

Two-stage least squares (2SLS) regression analysis can be used if the problem of endogeneity is present (Wooldridge, 2003). This method uses an instrumental variable, which is a variable in the explanatory equation that is correlated to the endogenous independent variable, but not correlated to the error term (Wooldridge, 2003). A good instrumental variable has a high correlation with an endogenous independent variable, but low correlation with error terms (Wooldridge, 2003).

Endogeneity can be detected using Durbin–Wu–Hausman test (Wooldridge, 2003). This test estimates an OLS specification and 2SLS specification of the same equation and makes a comparison between the coefficient estimates of OLS and coefficient estimates of 2SLS. It examines whether coefficient estimates are statistically the same. The full hypothesis is that variables are exogenous. If it fails to reject the null hypothesis, endogeneity is not present, so OLS should be used. Otherwise, endogeneity is present, implying that 2SLS should be used.

# 4.4.1.3 Heteroscedasticity

Endogeneity does not reveal whether the variance is constant when independent variables change. The presence of heteroscedasticity indicates that the variance of the error terms is not statistically constant over a range of independent variables (Hair et al., 2010). If heteroscedasticity is present, the regression model is not the best linear unbiased estimates (BLUE). Violation of heteroscedasticity does not bias coefficient estimates of OLS, but bias the variance of coefficient estimates (Wooldridge, 2003). The coefficient estimates are rendered inefficient (Breusch and Pagan, 1979). A coefficient estimate of a regression with heteroscedasticity is still unbiased for the relationships between independent and dependent variables.

As a result, standard errors are incorrect. This means that hypothesis tests will not be valid (Wooldridge, 2003). Breusch-Pagan test and Cook-Weisberg test can be used to detect heteroscedasticity. If Breusch-Pagan test and Cook-Weisberg test is used, variance of error terms obtained from OLS is regressed on independent variables. The null hypothesis is that the coefficient estimates are statistically equal to 0. If the null hypothesis is rejected, it will conclude that variance of errors terms are correlated to independent variables, implying the presence of heteroscedasticity (Wooldridge 2003). Since the researcher uses the fixed effect panel data regression, Modified Wald test to detect group wise heteroscedasticity will be used. Robust standard errors can be used for regression if heteroscedasticity is present (Wooldridge, 2003). Robust standard error helps correct heteroscedasticity by adjusting standard error and p-value for heteroscedasticity (Wooldridge, 2003).

#### 4.4.1.4 Serial Correlation

Detecting the presence of heteroscedasticity does not reveal the relationships between error terms during different periods of time. Serial correlation indicates the relationships between error terms in different periods of time. Serial correlation in panel data models biases and reduces the efficiency of the results (Wooldridge, 2003). Serial correlation occurs when one observation's error in a particular period of time is correlated with the observation's error term in another period of time (Wooldridge, 2003). In order to identify serial correlation, this study conducted Wooldridge serial correlation test (2002). In case serial correlation is present, regression with robust standard errors should be used (Wooldridge 2003).

#### 4.5 Fixed Effects versus Random Effects

For the purpose of panel data regression, I need to determine whether to use random effect model or fixed effect model. Random effect model assumes that the unobserved individual specific effects do not have a correlation with independent variables. Marashdeh (2014, p.118) stated: "That is, as a linear regression model with a compound disturbance that may be consistently, albeit inefficiently, estimated by least squares. This random effects approach specifies that is a group specific random element, similar to except that for each group there is but a single draw that enters the regression identically in each period".

The fixed effect model assumes that unobserved individual specific effects are correlated with independent variables. Notably, it seeks to eliminate the unobserved individual specific effects on the regression (Marashdeh, 2014). The traditional view of the fixed effects model is to assume that the unobserved effect is a parameter that is to be estimated for each i (Marashdeh, 2014).

The Durbin–Wu–Hausman test can be used to determine whether the random or fixed effect regression should be used. If the test rejects null hypothesis, it can be inferred that random effects are biased and that fixed effects should be used (Wooldridge, 2003). Essentially, the test is used to ascertain whether there is a correlation between individual specific effects and independent variables in the model. The null hypothesis is that there is no correlation between them. The results for Durbin-Wu-Hausamn test are outlined in Chapter 5.

# 4.6 Definitions and Measurement of Variables

This section provides the definitions and measurement of variables for the archival modelling study.

### 4.6.1 Audit Quality

Audit quality was measured as the absolute value of discretionary accruals estimated by modified Jones model. The reasons why discretionary accruals should be used have been explained in Section 1.4. It is used in the statistical models of the main analysis conducted as part of the archival modelling study. The procedures for estimating the discretionary accruals are discussed in Section 4.8. Audit quality refers to the dependent variable in the statistical models. Lower discretionary accruals indicate higher levels of audit quality. For additional analysis, a dichotomous variable is used to indicate whether the absolute value of discretionary accruals is higher than the sample median. The dichotomous variable will be used as the additional analysis. If the discretionary accruals are found to be higher than the sample median, managers are more likely to manipulate the earnings without being detected by EAs.

#### 4.6.2 Audit Committee Independence

In this study, AC independence was measured as the proportion of independent non-executive directors on an AC. Independent non-executive directors are the most independent because they do not have any other relationship with the firm or its executives apart from the relationship through the AC. Independent non-executive directors are better than affiliated directors when it comes to monitoring the financial reporting or audit processes because they do not have relationships with the firm or its executive directors that influence independent oversight on managers (Ho, Liu and Wang, 2014; Liao and Hsu, 2013; Carcello, Hermanson and Ye, 2011; Sharma and Sharma, 2011; Dimitropoulos and Asteriou, 2010; Duchin, Matsusaka and Ozbas, 2010). Therefore, the researcher expects AC independence to positively relate to audit quality. All listed firms in the sample disclosed their independent ACMs.

#### 4.6.3 Audit Committee Expertise

AC expertise was assessed as the proportion of financial experts on an AC. Financial experts should better understand the technical aspects of accounting procedures, recognition criteria, internal control systems and valuation of assets and liabilities (Ho, Liu and Wang, 2014; Rickling, 2014; Dhaliwal, Naiker and Navissi, 2010; Naiker and Sharma, 2009). Since internal control sys-

tems are effective, EAs can depend upon it for external audits. The researcher expects the proportion of financial experts to have a positive association with audit quality.

#### 4.6.4 Audit Committee Diligence

AC diligence was measured as the number of AC meetings held annually. A diligent AC holds more meetings in order to discuss issues such as financial reporting, external and internal audits, internal control and relationships with EAs. These issues should significantly influence the effectiveness and efficiency of an external audit and in effect, audit quality (Rickling, 2014; Ho, Liu and Wang, 2014; Suarez et al., 2013; Sharma and Iselin, 2012; The UK Corporate Governance Code, 2012; Hong Kong Society of Accountants, 2002). If a firm conducts more AC meetings, audit quality may improve. The researcher is of the view that the number of AC meetings positively relates to audit quality.

### 4.6.5 Audit Committee Size

The number of ACMs may indicate the resources available for the purpose of overseeing audit quality. A large AC may have more manpower, experience and expertise to monitor audit quality (Ho, Yasser and Al Mamun, 2016; Liu and Wang, 2014; Rickling, 2014; Nelson and Devi, 2013;

Baxter and Cotter 2009). However, prior studies suggest that the results are mixed. The researcher expects AC size to significantly relate to audit quality without a predetermined sign.

#### 4.6.6 Audit Committee Directorships

If ACMs have more directorships, they should be more experienced in monitoring financial reporting process as well as audit processes of different companies (Rickling, 2014; Alkdai and Hanefah, 2012; Kang and Kim, 2011; Ahn et al., 2010; Frye and Wang, 2010; Sarkar and Sarkar, 2009). However, if they are in charge of more directorships, they may be too busy performing their oversight role in each of the firms (Rickling, 2014; Habbash, Sindzingue and Salama, 2012; Sharma and Iselin, 2012; Dhaliwal, Naiker and Navissi, 2010). Therefore, ACMs may reduce oversight effort. The researcher expects the AC directorships to have a significant association with audit quality without a predetermined sign.

#### 4.6.7 Audit Committee Tenure

ACMs may acquire more knowledge and experience of monitoring financial reporting and audit process in a specific company over a period of time, so longer AC tenure should help them enhance audit quality (Wilson 2017; Chan, Liu and Sun, 2013; Aldamen et al. 2012; Ghosh, Marra and Moon, 2010; Yang and Krishnan, 2005). Long-tenured ACMs may establish working rela-

tionships with managers in order to obtain useful information for their judgments on accounting issues (Sun and Liu, 2010). However, long-tenured ACMs may become familiar with managers, thus potentially impairing their oversight role on managers (Rickling, 2014; Singhvi, Rama and Barua, 2013; Vineeta and Errol, 2012). The researcher expects AC tenure to significantly relate to audit quality without a predetermined sign.

### 4.6.8 Audit Committee Age

Older ACMs are more concerned with their reputational and litigation risk (Ward, Sonnenfeld and Kimberly, 1995; Eriksson, 1991; Veiga, 1983). Moreover, older ACMs may have more experience than their younger counterparts. This may make it easier for them to detect weaknesses in internal control systems (Qi and Tian, 2012). Consequently, the researcher expects that AC age positively relates to audit quality.

#### 4.6.9 Control Variables

Apart from AC characteristics, other variables which may affect audit quality should also be included in a model. A model will be misspecified without controlling for the effects of these variables (Hair et al., 2010). Controlling the variables to reduce the noise improves the internal validity of the study. The first control variable is auditor independence, which is measured as the proportion of nonaudit fees to the total fees earned by an audit firm. If high levels of non-audit fees are earned by an audit firm from a single client, EAs may be inclined to tolerate earnings management by that client. This, in turn, may reduce audit quality (Lary and Taylor, 2012; Chanhine and Filatotchev, 2011). Therefore, the researcher expects that the proportion of non-audit fees negatively relates to audit quality.

Choice of auditor was measured in terms of whether sample firms appointed Big 4 audit firm as their EAs. Big 4 auditors have more manpower and expertise for external audits. Additionally, since they face greater risk to their reputation if they provide inaccurate audit opinion, they are motivated to perform external audits diligently (Zalata, Tauringgana and Tingbani, 2018; Vlaminck and Sarens, 2015; Bruynseels and Cardinaels, 2014; Rickling, 2014; Xu, 2014; Zaman, Hudaib and Haniffa, 2011; Owens-Jakson, Robinson and Shelton, 2009). Therefore, the researcher expects that the appointment of Big 4 auditors positively relates to audit quality.

Profitability was measured as net income normalised by lagged total assets. Prior studies found that profitability positively related to audit quality. If a company reports a loss, it may be more likely that managers are under pressure to manipulate earnings, so EAs may find it more difficult to detect earnings management (Yasser and Al Mamun, 2016; Vlaminck and Sarens, 2015; Baccouche, Hadriche and Omri, 2013; Ho and Kang, 2013; Rainsbury, Bradbury and Cahan, 2009). For this reason, the researcher expects that profitability positively relates to audit quality.

Inherent risk was measured as the sum of account receivable and inventory to lagged total assets. Account receivables and inventory are considered as the items with high inherent risk (Galderon, Wang and Klenotic, 2012; Hoitash, Hoitash and Bedard, 2007; Hay, Knechel and Wong, 2006). High inherent risk in inventory and account receivables makes it difficult for EAs to detect earnings management. Since the recognition and valuation of account receivables and inventory highly depends on managers' subjective judgment, there are more opportunities for earnings management. Consequently, EAs may find it more difficult to perform effective audits on accounts receivable and inventory. Thus, the researcher expects that the inherent risk negatively relates to audit quality.

Leverage was measured as debt ratio in the model. Firms with high levels of debt may manage earnings to meet the requirements specified in debt-covenants (Nelson and Devi, 2013; Ghosh, Marra, and Moon, 2010; Jiang, Petroni, and Wang, 2010; Owens-Jackson, Robinson and Shelton, 2009). Higher leverage may lead to lower audit quality because ACMs may not support EAs' po-

sitions that require managers to recognise the items that may increase the levels of leverage of firms. Thus, the researcher expects that leverage negatively relates to audit quality.

Firm size was captured by the log value of total assets of the sample firms. Since they are not expected to be normally distributed, they are transformed to achieve normality of data distribution. Managers may find it more difficult to manipulate earnings in a large firm because it is more likely to be scrutinised by investors and financial analysts. Also, a large firm has more resources to design effective internal control systems (Wilson, 2017; Hamdan, Mushtaha and Al-Sartawi, 2013; Nelson and Devi, 2013; Baccouche, Hadriche and Omri. 2013; Rezaei and Roshani, 2012; Ghosh, Marra and Moon, 2010; Owens-Jackson, Robinson and Shelton, 2009). The researcher expects the firm size to positively relate to audit quality.

The effects of the number of institutional investors were controlled in this study. Cleary and Wang (2017) suggested that institutional investors have more incentives and better abilities to obtain information and monitor corporate actions more efficiently. Therefore, the number of institutional investors may negatively relate to discretionary accruals because institutional investors may serve as another monitoring mechanism to oversee the financial statements of a company. Hence, it is more difficult for managers to engage in earnings management. However, when firms perform poorly, institutional investors may be forced to sell their investment in the compa-

nies. This means that managers may be under pressure to manage earnings so that their earnings can meet the anaylsts' forecast (Almutairi, 2013; Bushee, 1998; Carleton, Nelson and Weisbach, 1998). This study used the number of institutional investors rather than the proportion of institutional shareholding because the number of institutional investors provides a better measure as external monitoring. For example, the external monitoring effects of ten institutional investors, each holding 10 percent of the shareholding, are stronger than one institutional investor holding 40 percent of the shareholding. The researcher is of the view that the number of institutional investors significantly relate to discretionary accruals without a predetermined sign.

Duality of the roles of CEO and Chairman was measured as a dichotomous variable which takes on the value of 1 if the CEO and chairman of a company is the same person, otherwise 0. The roles of CEO and Chairman need to be segregated. If the same person serves as CEO and Chairman, he or she can personally monitor the falsified financial statements. Thus, EAs and ACMs may find it more difficult to detect earnings management, thus reducing the quality of audit (Xu, 2014; Chen et al., 2013; Abernathy et al., 2012; Krishnan and Visvanathan, 2009; Griffin, Lont and Sun, 2008). Therefore, the researcher expects that duality negatively relates to audit quality.

The other control variables relate to board characteristics, which include board independence, its

size, diligence, directorships, age and cumulative equity position in a company. Board independence was measured as the proportion of independent non-executive directors on the board. If there are high proportions of independent non-executive directors on the board, the board may be able to resist managers' influence in their oversight role and be more willing to support EAs' position (Zalata, Tauringana and Tingbani, 2018; Shankaraiah and Amiri, 2017; Bruynseels and Cardinaels, 2014). Therefore, audit quality may be enhanced. The researcher expects that the proportion of independent non-executive directors on the board positively relates to audit quality.

Board size was measured as the log value of the number of directors on the board. A large board may provide more expertise, experience and manpower with a view to monitor financial reporting, so that audit quality may be enhanced (Poretti, Schatt and Bruynseels, 2018; Shepardson, 2018; Zalata, Tauringana and Tingbani, 2018; Shankaraiah and Amiri, 2017; Xu, 2014; Pearce and Zahra, 1992). The researcher expects that board size positively relates to audit quality.

Board diligence was measured as the log value of number of board meetings in a year. A board that demonstrates a stronger commitment to fulfilling their oversight responsibilities may intensify their efforts in their oversight role in the financial reporting and audit processes (Kuang 2011;

Zaman, Hudaib and Haniffa. 2011). This implies a positive impact on audit quality. The researcher expects that board diligence positively relates to audit quality.

Board directorships were measured as the average number of directors' outside directorships. Prior studies suggested that board directorships may positively or negatively relate to audit quality. It may be positive because directors can gain more experience and expertise by serving on other boards (Zalata, Tauringana and Tingbani, 2018; Aldamen et al., 2012; Van den Heuvel, Gils and Voordeckers, 2006; Abidin 2009). However, it may be negative because they may become too busy performing their oversight role (Brown, Dai and Zur, 2018; Tanyi and Smith, 2015). The researchers expect that the board directorships significantly relate to audit quality without a predetermined sign.

Board age was measured as the average age of directors on the board. Older directors should have more experience and expertise that helps them monitor managers (Mustafa, Che-Ahmad and Chandren, 2018; Dao, Huang and Zhu, 2013; Anderson, Mansi and Reeb, 2004), so that audit quality may be enhanced. The researcher expects that board age positively relates to audit quality.

Board members' cumulative equity position was measured as directors' cumulative equity positions in the sample companies. Prior study suggested that board ownership encouraged directors on the board to reduce opportunistic behaviours, so they may become more diligent in overseeing managers, thus lowering the agency cost (Aldamen et al. 2012; Haniffa and Hudaib, 2006). Thus, audit quality may be enhanced. However, another stream of board shareholding research suggested that concentration ownerships of board members may encourage them to use their power to allow earnings management by reducing audit quality (Zalata, Tauringana and Tingbani, 2018; Akhtaruddin and Haron, 2010; Ching, Firth and Rui, 2006). Consequently, the reseacher expects that the cumulative equity position significantly relates to audit quality without a predetermined sign. Since the measurement and definitions of variables have been discussed in the statistical model, the subsequent section presents the models used to test the relationships between AC characteristics and audit quality.

Time variables have not been included in the regression model as control variables because from 2010 to 2015, there were no significant changes in events and Hong Kong corporate governance which may have significant impacts on audit quality.

Table 11 summarises the variables under investigation.

Variables	Definition	Data Source
ABSAUDQ	Absolute value of discretionary accruals	Datastream
	based on modified Jones model	
ASAUDQ1	Indicator that takes a value of 1 if the abso-	Datastream
	lute value of discretionary accruals is high-	
	er than the sample median	
LOGACSIZE	Natural log value of number of ACMs on	Annual report
	an AC	
ACIND	Proportion of independent non-executive	Annual report
	directors on the AC in Hong Kong	
ACCOM	The proportion of ACMs with accounting	Annual report

**Table 11:** Definitions of Variables (Archival Modelling Study)<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> This study finds that the number of institutional investors positively and significantly related to the absoluate value of discretionary accruals. Net income and the choice of Big 4 auditors are positively but insignificantly associated with the absolute values of discretionary accruals. These results are unexpected. These can be explained by the fact that if a company has many institutional investors, managers may be under pressure to manipulate earnings so that the financial performance meets the investors' expectations, so EAs may find it more difficult to detect earnings management. If a company has higher net income, it may have more complex transactions, so they may find it more difficult to detect earnings management. Additionally, since Big 4 auditors have dominated positions in the market, ACMs have few choices to choose the audit firms although they may reduce their audit effort, so audit quality may be lower. Also, they may suffer from over-confidence bias because they believe that their audit procedures provide high quality of audit, but ignore whether the procedures are appropriate to a specific company in a specific industry. Future research may investigate whether Big 4 auditors suffer from over-confidence bias in external audits.

	or finance expertise on an AC	
LOGACDIL	Natural log value of number of AC meet-	Annual report
	ings per year	
ACDIRECT	Average ACMs' directorships	Annual report
ACTENURE	Average years of ACMs on the board	Annual report
ACAGE	ACMs' average age	Annual report
LOGBSIZE	Natural log value of number of directors	Annual report
	on the board	
BIND	Proportion of independent non-executive	Annual report
	directors on the board	
LOGBDILIGENCE	Natural log value of the number of board	Annual report
	meetings in a year	
BDIRECT	Board members' average directorships	Annual report
BAGE	Board members' average age	Annual report
CUMBOADEQUITY	Proportion of board members' equity posi-	Annual report
	tion in a company	
DUALITY	Indicator that takes a value of 1 if CEO of	Annual report

	a company is the same person as chairman	
INSTITINVESTORS	Number of institutional investors invested	Bloomberg
	in the company	
NI	Net income normalised by lagged total as-	Datastream
	sets	
INHERENT	The sum of account receivables and inven-	Datastream
	tory normalised by lagged total assets	
NAF	Proportion of non-audit fees to total fees	Annual report
LEV	Total liabilities divided by total assets	Datastream
SIZE	Natural log value of total assets	Datastream
AUDITOR	Equal to 1 if a firm hires a Big 4 auditor,	Annual report
	otherwise 0	
LOGAFEE	Natural log value of audit fees	Annual report

# 4.7 Regression Model

The archival modelling study has eight models in order to examine the relationships between AC characteristics and audit quality. Models 1 and 2 make use of the absolute value of discretionary

accruals as a proxy for audit quality. Discretionary accruals were obtained by firstly regressing total accruals on change in revenues, gross property plant and equipment using Jones (1991) model with industry and year combination. All of them are normalised by lagged total assets. Total accruals were calculated using cash flow approach. The estimates of cofficients obtained in the Jones (1991) model were then used to estimate non-discretionary accruals using modified Jones model. Thereafter, the discretionary accruals which are subject to managers' manipulation were found. This approach was adopted by Bartov, Gul and Tsui (2001) and Debra and Shiva-kumar (1991). Models 3 to 4 signify the additional analysis. Models 3 and 4 measure audit quality in terms of whether discretionary accruals are higher than the sample median. Models 5 to 8 are the models for robustness checks. Models 5 and 6 make use of the log value of audit fees as a proxy for audit quality, whereas Models 7 and 8 use the appointment of Big 4 auditors as a proxy for it. The findings of these models are presented in Chapter 5. The models of the archival modelling study are specified as follows:

Main Analysis Model 1:

ASAUDQ<sub>*i*,*t*</sub> = 
$$\beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t}$$
  
+  $\beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t}$   
+  $+ \beta_8 \text{INSTITINVESTORS}_{i,t} + \beta_9 NAF_{i,t} + \beta_{10} NI_{i,t} + \beta_{11} \text{INHERENT}_{i,t}$   
+  $\beta_{12} \text{LEV}_{i,t} + \beta_{13} \text{SIZE}_{i,t} + \beta_{14} \text{AUDITOR}_{i,t} + \epsilon i_{i,t}$   
Model 2:  
ASAUDQ<sub>*i*,*t*</sub> =  $\beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t}$ 

+ 
$$\beta_5$$
ADIRECT<sub>*i*,*t*</sub> +  $\beta_6$ ACTENURE <sub>*i*,*t*</sub> +  $\beta_7$ ACAGE <sub>*i*,*t*</sub> +  $\beta_8$ LOGBSIZE +  $\beta_9$ BIND  
+  $\beta_{10}$ LOGBDILIGENCE +  $\beta_{11}$ BDIRECT +  $\beta_{12}$ BAGE +  $\beta_{13}$ CUMBOADEQUITY  
+  $\beta_{14}$ DUALITY +  $\beta_{15}$ INSTITINVESTORS <sub>*i*,*t*</sub> +  $\beta_{16}NAF$  <sub>*i*,*t*</sub> +  $\beta_{17}NI$  <sub>*i*,*t*</sub>  
+  $\beta_{18}$ INHERENT <sub>*i*,*t*</sub> +  $\beta_{19}$ LEV <sub>*i*,*t*</sub> +  $\beta_{20}$ SIZE <sub>*i*,*t*</sub> +  $\beta_{21}$ AUDITOR <sub>*i*,*t*</sub> +  $\varepsilon_{i}$  <sub>*i*,*t*</sub>

Additional Analysis Model 3: ASAUDQ1<sub>*i*,*t*</sub> =  $\beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t}$ +  $\beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t}$ +  $+ \beta_8 \text{INSTITINVESTORS}_{i,t} + \beta_9 \text{NAF}_{i,t} + \beta_{10} \text{NI}_{i,t} + \beta_{11} \text{INHERENT}_{i,t}$ +  $\beta_{12} \text{LEV}_{i,t} + \beta_{13} \text{SIZE}_{i,t} + \beta_{14} \text{AUDITOR}_{i,t} + \varepsilon_{i,t}$ 

Model 4:

$$\begin{split} \text{ASAUDQ1}_{i,t} &= \beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t} \\ &+ \beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t} + \beta_8 \text{LOGBSIZE} \\ &+ \beta_9 \text{BIND} + \beta_{10} \text{LOGBDILIGENCE} + \beta_{11} \text{BDIRECT} + \beta_{12} \text{BAGE} \\ &+ \beta_{13} \text{CUMBOADEQUITY} + \beta_{14} \text{DUALITY} + \beta_{15} \text{INSTITINVESTORS}_{i,t} \\ &+ \beta_{16} NAF_{i,t} + \beta_{17} NI_{i,t} + \beta_{18} \text{INHERENT}_{i,t} + \beta_{19} \text{LEV}_{i,t} + \beta_{20} \text{SIZE}_{i,t} \\ &+ \beta_{21} \text{AUDITOR}_{i,t} + \epsilon i_{i,t} \end{split}$$

Robustness Check:

Model 5: LOGAFEE  $_{i,t} = \beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t}$ 

+  $\beta_5$ ADIRECT<sub>*i*,*t*</sub> +  $\beta_6$ ACTENURE <sub>*i*,*t*</sub> +  $\beta_7$ ACAGE <sub>*i*,*t*</sub>

+ +  $\beta_8$ INSTITINVESTORS <sub>*i*,*t*</sub> +  $\beta_9$ *NAF* <sub>*i*,*t*</sub> +  $\beta_{10}$  *NI* <sub>*i*,*t*</sub> +  $\beta_{11}$ INHERENT <sub>*i*,*t*</sub>

+ 
$$\beta_{12}$$
LEV <sub>*i*,*t*</sub> +  $\beta_{13}$ SIZE <sub>*i*,*t*</sub> +  $\beta_{14}$ AUDITOR <sub>*i*,*t*</sub> +  $\epsilon i_{i,t}$ 

Model 6:  
LOGAFEE 
$$_{i,t} = \beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t}$$
  
 $+ \beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t} + \beta_8 \text{LOGBSIZE}$   
 $+ \beta_9 \text{BIND} + \beta_{10} \text{LOGBDILIGENCE} + \beta_{11} \text{BDIRECT} + \beta_{12} \text{BAGE}$   
 $+ \beta_{13} \text{CUMBOADEQUITY} + \beta_{14} \text{DUALITY} + \beta_{15} \text{INSTITINVESTORS}_{i,t}$   
 $+ \beta_{16} NAF_{i,t} + \beta_{17} NI_{i,t} + \beta_{18} \text{INHERENT}_{i,t} + \beta_{19} \text{LEV}_{i,t} + \beta_{20} \text{SIZE}_{i,t}$   
 $+ \beta_{21} \text{AUDITOR}_{i,t} + \epsilon i_{i,t}$ 

Model 7:

AUDITOR <sub>*i*,*t*</sub> = 
$$\beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t}$$
  
+  $\beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t}$   
+  $+ \beta_8 \text{INSTITINVESTORS}_{i,t} + \beta_9 NAF_{i,t} + \beta_{10} NI_{i,t} + \beta_{11} \text{INHERENT}_{i,t}$   
+  $\beta_{12} \text{LEV}_{i,t} + \beta_{13} \text{SIZE}_{i,t} + \varepsilon_{i,t}$   
Model 8:

AUDITOR 
$$_{i,t} = \beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t}$$
  
+  $\beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \beta_7 \text{ACAGE}_{i,t} + \beta_8 \text{LOGBSIZE}$   
+  $\beta_9 \text{BIND} + \beta_{10} \text{LOGBDILIGENCE} + \beta_{11} \text{BDIRECT} + \beta_{12} \text{BAGE}$   
+  $\beta_{13} \text{CUMBOADEQUITY} + \beta_{14} \text{DUALITY} + \beta_{15} \text{INSTITINVESTORS}_{i,t}$   
+  $\beta_{16} NAF_{i,t} + \beta_{17} NI_{i,t} + \beta_{18} \text{INHERENT}_{i,t} + \beta_{19} \text{LEV}_{i,t} + \beta_{20} \text{SIZE}_{i,t}$   
+  $\epsilon i_{i,t}$ 

# 4.8 Chapter Summary

Commencing with the justification for archival research method, this chapter discusses the sample selection process as well as data collection procedure. This final sample for the analysis equals 1,714 firm observations. It then goes on to discuss assumptions and justification of panel data regression. In addition, this chapter defines the dependent variables, audit quality and independent variables for the purpose of statistical analysis. The chapter concludes with an explanation of the regression models and statistical models that are employed in order to examine the impacts of AC characteristics on audit quality.

# CHAPTER 5 RESEARCH FINDINGS (ARCHIVAL MODELLING STUDY)

# **5.1 Introduction**

This chapter provides the research findings obtained from the archival modelling that has been discussed in Chapter 4; it begins by outlining the descriptive statistics of the variables employed in the analysis that investigates the influence of AC characteristics on audit quality. This is followed by the results of tests that examine the violation of key assumptions. The chapter then presents the results of detailed multivariate regression analysis evaluating the hypotheses outlined in Chapter 2. The multivariate analysis includes an investigation of the impact of various AC characteristics on audit quality. This chapter also undertook additional analysis probit panel data regression as well as robustness check using different proxies for audit quality, such as auditor choice and audit fees. Finally, the chapter ends by summarising the results of the archival modelling study.

#### **5.2 Descriptive Statistics**

Descriptive information (mean, standard deviation, minimum and maximum values) on dependent and independent variables have been depicted in Tables 12, 13 and 14 respectively.

Continuous Variables	Mean	SD	Min	Max
ABSAUDQ	0.104	0.33	0.000	11.86
LOGBSIZE	2.27	0.26	1.38	3.09
BAGE	54.92	4.95	38.63	71.45
LOGBDILIGENCE	1.82	0.511	0	4.26
BIND	0.38	0.09	0.13	0.75
BDIRECT	0.93	0.86	0	6.4
LOGACSIZE	1.22	0.196	0.693	1.94
ACCOM	0.40	0.24	0	1
ACIND	0.91	0.15	0.25	1
ACAGE	58.31	6.74	37.67	77.33
ACDIRECT	1.68	1.55	0	8
LOGACDIL	1.082	0.41	0	3.09
ACTENURE	6.15	3.92	0.04	24.03
INHERENT	0.559	9.72	0	402.81
NI	0.058	0.42	-2.8	0.95
INSTITINVESTORS	107.8	99.49	0	733
CUMBOADEQUITY	0.38	0.56	0	3.81

 Table 12: Descriptive Statistics for Continuous Variables (Archival Modelling Study)

SIZE	16.95	1.573	10.53	21.56
LEV	0.48	0.22	0.006	2.20

**Table 13:** Descriptive Statistics for Dichotomous Variables (Archival Modelling Study)

Dichotomous	Indicator	Frequency	Percent	Cumulative
Variables				
AUDITORS	0	176	10.26	10.24
	1	1,538	89.73	100.00
DUALITY	0	1,235	72.05	72.05
	1	479	27.95	100.00

**Table 14:** Descriptive Statistics for Absolute Values of Discretionary Accruals by Industry

(Archival Modelling Study)

Industry	Industry Code	Observations	Mean	Standard Deviations	Min	Max
Customer	1	425	0.11	0.24	0.0003	3.012
Goods						
Customer	2	301	0.047	0.059	0.00009	0.53
Services						
Energy	3	209	0.084	0.083	0.0001	0.623
Industrials	4	276	0.142	0.199	0.0005	1.739

Information	5	160	0.114	0.2471	0.00047	2.704
Technology						
Properties and	6	344	0.126	0.646	0.00046	11.86
Construction						
Total		1714				

The mean of absolute values of discretionary accruals is 0.104. In the UK, Habbash (2012) reported that the mean was 0.07 from 2005 to 2007. In Malaysia, Mohammad et al. (2007) reported that the means were 0.2284 in 2004, 0.2588 in 2015 and 0.24 in 2016. In Hong Kong, Jaggi and Leung (2007) reported that the mean was 0.115 from 1999 to 2000. The mean of this study is close to the mean of prior studies in Hong Kong.

On average, firms in industrial industries have the highest mean of discretionary accruals (0.142) followed by firms in properties and construction (0.128) and information technology (0.114), but customer service companies have the lowest (0.047). The property and construction companies have the highest discretionary accrual (11.86) but the customer service companies have the lowest (0.00009). The property and construction companies have industry specific accounting policy and estimates, so it involves complex transactions and valuation process. Information technology companies involve complex process, so companies in these industries have higher discretionary accruals. The customer service companies have relatively low levels of inventories and accounts

receivable, so inherent risk of the assets should be lower. Therefore, it is easier for them to monitor the manipulation of earnings, so the discretionary accruals are the lowest.

For AC variables, the mean of average AC age is 58.31 with the minimum value of 37.67 and the maximum value of 77.33. Notably, the youngest AC has the age of 37.67. It is relatively young. In the US study, Dao, Huang and Zhu (2013) reported that the average AC age is 60.87 from 2007 to 2009. The age of this study is close to the age in the US.

The mean of average AC directorships is 1.67 with a minimum value of 1 and a maximum value of 8. On average, they are not known to be very busy in terms of outside directorships because they have 1-2 outside directorships on average. In the US, Garven (2015) reported that the mean of average AC directorships is 1.65. Similarly, Dao, Huang and Zhou (2013) reported that the mean of average AC directorships was 1.58 from 2007 to 2009. The mean of this study is close to the mean in the US.

Concerning the proportion of AC financial experts, the mean is 0.40. On average, 40 percent of ACMs on the AC is accounted for by financial experts. In the US, Garven (2015) reported that the finance expertise is 0.457. In Hong Kong, Chan et al. (2011) reported that financial expertise in 2006 was 0.49. It is interesting to observe that the mean of the proportion of financial experts in Hong Kong have decreased by 9 percent.

The mean of the proportion of independent non-executive ACMs is 0.91, with the minimum value of 0.25 and the maximum value of 1. This is consistent with the findings of Ghafran and O'Sullivan (2017), who reported 95.29 percent of AC independence in the UK. In Malaysia, Mohammad et al. (2007) reported that the mean of AC independence was approximately 0.7 from 2004 to 2006. In a study on Chinese firms listed in Hong Kong, Lin, Li and Wang (2006) reported that the mean of AC independence was 0.835. In Hong Kong, Chan et al. (2011) reported that AC independence stood at 0.906 in 2006. While the mean was higher than the mean of the Chinese companies listed in HK and Malaysia companies, it was lower than the mean of UK companies. It may be noted that the mean of the proportion in Hong Kong did not change significantly.

The mean of the number of ACMs is 3.39 (log value = 1.22). In Hong Kong, Lin, Li and Wang (2007) reported that the number of directors on an AC was 3.54 from 2004 to 2008. AC size from 2010 to 2015 was close to the size from 2004 to 2008.

The mean of the number of AC meetings is 2.95 (log value = 1.082). In the US, the number of AC meetings is 7.91. ACMs are known to be more diligent in the US than ACMs in Hong Kong. The mean of average AC tenure on the board is 6.15, with a maximum value of 24.03 and a minimum value of 0.04. In the US, Garven (2015) reported that the average AC tenure on the board is 7.62. Meanwhile in Hong Kong, the range of average AC tenure on the board is approximately 24 years. On average, ACMs served on the board for 6.15 years.

In terms of board variables, board size is 9.77 (log value = 2.27) In the UK, Habbash (2012) reported that the number of directors on the board from 2005 to 2007 was 9.07. In Hong Kong, Cheng, Lui and Shum (2015) pointed out that the number of directors on the board was 8.77. The board size is slightly higher than that of the study conducted in the UK and similar to the value reported by Cheng, Lui and Shum (2015).

The mean of independent non-executive directors on a board is 0.38. On average, approximately 38 percent of board members are independent non-executive directors in Hong Kong. This is lower than the study conducted by Ghafran and Sullivan (2017), who stated that the mean of board independence was 48.23 percent in the UK, but higher than the study conducted by Mohammad et al. (2007) who, in turn, reported a mean of 0.4 in Malaysia. In the US, Garven (2015) reported that board independence is 0.742. Lin and Liu (2013) reported that the mean of board independence from 1999 to 2007 was 0.33 in Hong Kong. Cheng, Lui and Shum (2015) reported that the mean value of board independence stood at 0.395 from 2008 to 2009. Analogously, Chan et al. (2011) stated that the independence in 2006 was 0.374. The mean of this study was similar to means of other studies that were conducted in Hong Kong and Malaysia. However, board members in Hong Kong are less independent than those in the UK and the US.

The mean of the number of board meetings was 6.17 (log value = 1.82). In Malaysia, Mohammad et al. (2007) reported that the number of board meetings were 3.98 in 2004, 5 in 2005, and

5.12 in 2006. Board members are known to be more diligent in Hong Kong than those in Malaysia.

The mean of average board age is 54.92. In a study that was conducted in the US, Dao, Huang and Zhu (2013) reported that average board age from 2007 to 2009 was 59.36. In Hong Kong, board members are younger than those in the US by five years.

The mean of board of directors' cumulative equity position is 0.38, with a minimum value of 0 and a maximum value of 3.81. On average, a board has 38 percent of the equity position of a company, with the maximum value being 381 percent. It is more than 100 percent because the underlying shares were also included in the cumulative equity position. In the US, Krishnan and Visvanathan (2009) reported that cumulative percentage of voting control held by managers and directors from 2000 to 2002 was 0.053. In Hong Kong, Lei and Song (2012) reported that the ownerships held by directors from 2000 to 2008 were 0.23. The directors' cumulative equity position of Hong Kong companies is much higher than that of US companies.

Moreover, 27.95 percent of the firms had the same person as CEO and Chairman in this study. Approximately 30 percent of the companies in the sample entrusted the responsibility of both CEO and Chairman in the hands of a single person. This is lower than the value of the study conducted by Garven (2015) in the US, who reported that the mean of duality was 0.487. In Hong Kong, Cheng, Liu and Shum (2015) reported that the duality from 2008 to 2009 was 0.33.

Chan et al. (2011) reported that the mean of duality in 2006 was 0.73. The mean is lower than the value of the study in the US as well as studies conducted in Hong Kong from 2006 to 2009.

The mean of board directorships is 0.93, which is lower than the mean of the studies conducted by Garven (2015) and Dao, Huang and Zhu (2013), who reported that the mean from 2007 to 2009 was 1.66 and 1.21, respectively. In Hong Kong, Chan et al. (2011) reported that average board directorship in 2006 was 2.83. Average board directorship in this study was found to be lower than the values of the studies carried out in the US as well as the study conducted in Hong Kong in 2006.

For other control variables, the mean of net income normalised by lagged total assets (ROA) is 0.058. In a study relating to Chinese firms listed in Hong Kong, Lin et al. (2009) reported that the mean was 0.05. In Hong Kong, Jaggi and Leung (2007) reported the mean was -0.0350 from 1999 to 2000. In this study, 89.73 percent of the companies appointed Big 4 as EAs, indicating that most of the companies appointed Big 4 auditors. In Hong Kong, Lin, Li and Yand (2006) reported that the percent of Big 4 auditor was 0.78. On the other hand, Lin and Liu (2013) stated that the percent of Big 4 auditor from 1999 to 2007 is 0.87. This may imply that more companies have shown an inclination to appoint Big 4 auditors in recent years.

The mean of total assets was 22,908,676 (log value = 16.95), equivalent to which are lower than the study conducted by Ghafran and O'Sullivan (2017), who reported that the mean value of total assets was \$10,96,478,196 in the US. Meanwhile, Garven (2015) reported that the mean value of total assets was \$831,764. In Hong Kong, Jaggi and Leung (2007) reported that the mean of total assets from 1999 to 2000 were \$74,131. The mean of the number of institutional investors was 107.8.

The mean of leverage is 0.48, implying that approximately 50 percent of the assets was funded by total liabilities in this study. Malaysian companies had lower levels of leverage. Mohammad et al. (2007) reported that leverage was 0.27 in 2004, 0.29 in 2006 and 0.31 in 2007. In the US, Garven (2015) mentioned that leverage was 0.497. In Hong Kong, Lin and Liu (2013) reported that the mean of leverage from 1999 to 2007 was 0.38, which is higher than the study in the Malaysia, but close to the study in the US. The mean of leverage in this study is also higher than the mean of the study conducted in Hong Kong from 1999 to 2007.

The mean of inherent risk was 0.559. On average, 55.9 percent of the total assets had a high inherent risk. In the US, Krishnan and Visvanathan (2009) reported that inherent risk stood at 0.241 from 2000 to 2002. Hay et al. (2008) reported that inherent risk was 0.25 in 2005. The mean of the study was higher than the means of the studies conducted in the US.

# **5.3 Assumptions of Regression Analysis**

The consequences of violations of assumptions have been discussed in Sections 4.4.1 to 4.4.1.4.

This section only discusses the results of the tests detecting the violation of the assumptions. Tables 15 and 16 show the absence of multicollinearity because correlation coefficients between variables are lower than 0.90 and that VIF for all variables are lower than 10. Table 17 depicts the results of Durbin-Wu-Hausman test. Since the null hypothesis cannot be rejected at p<0.05, 0.01 or 0.001, it is inferred that endogeneity is not present. Table 18 illustrates the results of Modified Wald Test for Group wise Heteroskedasticity for panel data. It indicates that heteroscedasticity is present, implying that robust standard errors should be used for regression. This can also be corrected using robust standard errors. Table 19 shows the results of Woodridge serial correlation test. It indicates that serial correlation is not present since p-value is higher than 0.05.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	1.00													
2	-0.05	1.00												
3	-0.04	-0.21	1.00											
4	0.01	-0.15	-0.00	1.00										
5	-0.06	0.15	-0.16	0.06	1.00									
6	-0.05	-0.05	0.15	-0.08	-0.11	1.00								
7	-0.07	-0.00	0.04	-0.14	-0.08	0.23	1.00							
8	-0.05	0.03	0.11	-0.21	-0.01	0.31	0.43	1.00						
9	-0.01	0.08	0.06	0.041	0.06	-0.03	-0.01	0.03	1.00					
10	-0.03	0.35	-0.07	-0.06	0.13	0.02	0.12	0.14	-0.50	1.00				
11	0.03	0.08	-0.07	0.07	0.29	-0.16	-0.14	-0.16	0.07	0.01	1.00			
12	-0.08	0.08	-0.08	-0.15	0.11	0.21	0.44	0.74	0.14	0.16	-0.13	1.00		
13	0.01	0.07	0.09	-0.12	-0.10	0.74	0.32	0.35	0.15	0.04	-0.16	0.36	1.00	
14	-0.06	-0.04	0.10	-0.06	-0.22	0.09	0.09	0.02	-0.05	-0.02	-0.11	-0.02	0.02	1.00
15	0.02	-0.07	0.08	-0.05	-0.07	0.01	0.08	0.02	0.10	-0.13	-0.15	-0.05	-0.05	0.25
16	0.52	-0.01	-0.03	0.01	-0.00	-0.02	0.00	-0.01	-0.07	0.06	-0.04	0.01	-0.03	0.05
17	0.13	-0.00	0.01	-0.05	-0.04	-0.01	-0.03	0.02	-0.01	-0.03	-0.03	-0.04	-0.05	0.09
18	0.08	-0.02	0.04	-0.04	-0.09	0.07	0.12	0.06	0.025	0.08	0.02	0.02	0.13	0.05
19	-0.10	0.21	-0.11	-0.08	-0.36	0.08	0.14	0.26	-0.04	0.38	0.13	0.31	0.13	-0.15
20	0.85	-0.01	-0.04	0.03	-0.03	-0.02	-0.04	-0.01	-0.01	0.01	0.02	-0.01	-0.02	-0.02
21	-0.07	0.20	-0.01	-0.1	0.35	0.08	0.19	0.26	0.05	0.34	0.02	0.31	0.15	-0.16
22	-0.05	0.04	-0.06	-0.08	0.07	0.15	0.07	0.15	-0.06	0.13	-0.17	0.11	0.13	0.09

# Table 15: Pearson Correlations (Archival Modelling Study)

	15	16	17	18	19	20	21	22
15	1.00							
16	0.01	1.00						
17	0.10	0.07	1.00					
18	0.00	0.04	-0.01	1.00				
19	-0.06	0.02	0.01	-0.05	1.00			
20	-0.01	0.72	0.06	0.08	0.01	1.00		
21	-0.07	0.04	-0.04	-0.01	0.65	-0.03	1.00	
22	0.04	0.09	0.03	0.04	0.18	0.00	0.12	1.00

# Where:

1 ABSAUDQ	12 BAGE
2 LOGACSIZE	13 BDIRECT
3 ACIND	14 CUMBOADEQUITY
4 ACCOM	15 DUALITY
5 LOGACDIL	16 NI
6 ACDIRECT	17 INHERENT
7 ACTENURE	18 NAF
8 ACAGE	19 SIZE
9 BIND	20 LEV
10 LOGBSIZE	21 INSTITINVESTORS
11 LOGBCDIL	22 AUDITOR

Variables	VIF	1/VIF
2	1.41	0.71
3	1.21	0.83
4	1.11	0.90
5	1.4	0.71
6	3.35	0.30
7	1.43	0.70
8	2.72	0.37
9	1.90	0.53
10	2.18	0.46
11	2.99	0.33
12	3.72	0.27
13	1.26	0.79
14	1.20	0.83
15	1.16	0.86
16	1.30	0.77
17	1.05	0.96

# Table 16: VIF (Archival Modelling Study)

18	1.08	0.92
19	1.30	0.77
20	1.51	0.66
21	2.17	0.46
22	1.16	0.86
Mean VIF	1.80	

**Table 17:** Durbin-Wu-Hausman (Archival Modelling Study)

Durbin (score) chi-square = $11.41$ (p = $0.08$ )	
Wu-Hausman $F(3,1687) = 0.494$ (p = 0.08)	
* p-value < 0.05 ** p-value < 0.01 *** p-value < 0.001	]

Table 18: Modified Wald Test	for Groupwise Heteroskedasticity	(Archival Modelling Study)
------------------------------	----------------------------------	----------------------------

Modified Wald test for group wise heteroskedasticity in fixed effect regression model						
Chi-square	1.2e+06					
Prob>chi2	0.0000***					

\* p-value < 0.05 \*\* p-value < 0.01 \*\*\* p-value < 0.001

 Table 19: Wooldridge Serial Correlation Test

F(1, 292) = 1.166 p-value = 0.2812

\* p-value < 0.05 \*\* p-value < 0.01 \*\*\* p-value < 0.001

Table 20 summarises the violation of assumptions for regression analysis.

<b>Table 20:</b> Violation of Assumptions for Regress	: Violation of Assumptions for Regress	sion
---	--	------

Assumptions	Violated	Correction
Multi-collinearity	No	No corrections are needed.
Endogeneity	No	No corrections are needed.
Heteroscedasticity	Yes	Robust standard errors were used.
Serial Correlation	No	No corrections are needed.

#### 5.4 Durbin-Wu-Hausman test

The details of Durbin-Wu-Hausman Test have been discussed in Section 4.5. As a result, this section only presents the results of the test. Table 21 depicts that the chi-square is equal to 76.30 and p<0.001, implying that the null hypothesis is rejected. Therefore, fixed effect panel data regression should be used.

Table 21: Durbin-Wu-Hausman Test

Chi-square	76.38
Prob>Chi-square	0.0000***

\* p-value < 0.05 \*\* p-value < 0.01 \*\*\* p-value < 0.001

### **5.5 Main Findings**

Sections 5.3 and 5.4 concluded that fixed effect panel data regression with robust standard errors should be utilised in the archival modelling study. The main objective of this analysis is to investigate the research hypothesis concerning the impact of effective characteristics of an AC on audit quality. The main models were run for two separate regressions. The models' dependent variable is the absolute value of discretionary accruals. R-squares are 0.745 and 0.697 in Models 1 and 2, respectively; they are higher than that of similar studies conducted by Aier et al. (2005) at 0.0053, Baxter and Cotter (2009) at 0.003, Nelson and Devi (2013) at 0.042, Rainsbury, Brad-

bury and Cahan (2009) at 0.066. Model 1 displays the results using effective characteristics of an AC as well as other control variables without effective board characteristics as control variables. The findings of Model 1 have been summarised in Table 22. Model 1 is specified as follows:

ASAUDQ<sub>*i*,*t*</sub> = 
$$\beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t}$$
  
+  $\beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t}$   
+  $+ \beta_8 \text{INSTITINVESTORS}_{i,t} + \beta_9 NAF_{i,t} + \beta_{10} NI_{i,t} + \beta_{11} \text{INHERENT}_{i,t}$   
+  $\beta_{12} \text{LEV}_{i,t} + \beta_{13} \text{SIZE}_{i,t} + \beta_{14} \text{AUDITOR}_{i,t} + \epsilon i_{i,t}$ 

	Co-efficient	Robust Standard Error	p-values
LOGACSIZE	-0.377	0.132	0.005**
ACIND	-0.028	0.058	0.0636
ACCOM	-0.121	0.041	0.004**
LOGACDIL	-0.042	0.065	0.520
ACDIRECT	-0.016	0.013	0.248
ACTENURE	-0.005	0.002	0.029*
ACAGE	-0.002	0.001	0.238
INSTITINVESTORS	0.0002	0.0001	0.028*
NAF	0.0086	0.04	0.820

 Table 22: Results of Model 1

NI	0.145	0.13	0.278
INHERENT	0.085	0.0186	0.000***
LEV	0.033	0.004	0.000***
SIZE	-0.081	0.048	0.097
AUDITOR	0.010	0.072	0.134
Constant	0.99		0.019*
R-square (within)	0.789		
R-square (between)	0.510		
R-square (overall)	0.745		
F-statistics	12971.41		0.0000***
N=1714			

According to the results, the proportion of ACMs' financial expertise and log value of the number of AC members negatively relate to the absolute value of discretionary accruals at p<0.01. Average AC tenure negatively relates to the accruals at p<0.05. For control variables, the number of institional investors positively relate to discretionary accruals at p<0.05. Inherent risk and leverage positively relate to discretionary accruals at p<0.001. This indicates that managers may be under pressure to manipulate earnings to target institutional investors' expectation if they are looking at the company's earnings. Inherent risk makes EAs more difficult to detect earnings management. Mangers may manage earnings if a company has higher leverage, because they want to show that the financial health of their companies is still strong. The results confirm that AC size, financial expertise and tenure are important in the context of improving audit quality. The result demonstrates that Model 1 is significant at p<0.001 and R-square is 0.745, which indicates that 74.50 percent of the variance of audit quality can be explained by independent variables.

Model 2 shows the results using both effective board and AC characteristics with other control variables. The findings have been summarised in Table 23. The model is specified as follows:

ASAUDQ<sub>*i*,*t*</sub> = 
$$\beta_0$$
 +  $\beta_1$ LOGACSIZE<sub>*i*,*t*</sub> +  $\beta_2$ ACIND<sub>*i*,*t*</sub> +  $\beta_3$ ACCOM<sub>*i*,*t*</sub> +  $\beta_4$ LOGACDIL<sub>*i*,*t*</sub>  
+  $\beta_5$ ADIRECT<sub>*i*,*t*</sub> +  $\beta_6$ ACTENURE<sub>*i*,*t*</sub> +  $\beta_7$ ACAGE<sub>*i*,*t*</sub> +  $\beta_8$ LOGBSIZE  
+  $\beta_9$ BIND +  $\beta_{10}$ LOGBDILIGENCE +  $\beta_{11}$ BDIRECT +  $\beta_{12}$ BAGE  
+  $\beta_{13}$ CUMBOADEQUITY +  $\beta_{14}$ DUALITY +  $\beta_{15}$ INSTITINVESTORS<sub>*i*,*t*</sub>  
+  $\beta_{16}NAF_{i,t}$  +  $\beta_{17}NI_{i,t}$  +  $\beta_{18}$ INHERENT<sub>*i*,*t*</sub> +  $\beta_{19}$ LEV<sub>*i*,*t*</sub> +  $\beta_{20}$ SIZE<sub>*i*,*t*</sub>  
+  $\beta_{21}$ AUDITOR<sub>*i*,*t*</sub> +  $\epsilon i_{i,t}$ 

	Co-efficient	Robust Std Error	p-values
LOGACSIZE	-0.23	0.114	0.041*
ACIND	-0.014	0.060	0.804
ACCOM	-0.100	0.034	0.005**
LOGACDIL	-0.019	0.058	0.747
ACDIRECT	0.001	0.008	0.856
ACTENURE	-0.003	0.002	0.175
ACAGE	0.004	0.002	0.040*
BIND	-0.067	0.081	0.405
LOGBSIZE	-0.211	0.172	0.219
LOGBDILLIGENCE	-0.018	0.037	0.637
BAGE	-0.014	0.004	0.003**
BDIRCT	-0.054	0.032	0.098
CUMBOADEQUITY	0.087	0.069	0.208
DUALITY	0.010	0.018	0.588
NI	-0.015	0.012	0.220

 Table 23: Results of Model 2

INHERENT	0.084	0.016	0.000***
NAF	0.022	0.032	0.491
SIZE	-0.077	0.041	0.058
LEV	0.033	0.003	0.000***
INSTITINVESTORS	0.0003	0.0001	0.008**
AUDITOR	0.093	0.057	0.104
Constant	1.515		0.004**
R-square (within)	0.7957		
R-square (between)	0.3741		
R-square (overall)	0.697		
F-statistics	16960		0.0000***
N=1714			

According to the results, the proportion of AC financial expertise negatively relates to the absolute value at p<0.01. The log value of AC size negatively relates to it at p<0.05. However, average AC age positively relates to it at p<0.05. Average average board age negatively relate to it at p<0.01. Similally, inherent risk and leverage relate to it positively at p<0.001. Number of institutional investors positively relate to it at p<0.01. R-square is equal to 0.697. Consequently, the

hypothesis positive significant relationships exist between audit quality and AC expertise and size. However, average AC age negiatively relates to audit quality.

In conclusion, the study uses fixed effect panel data analysis with robust standard errors to control for firm heterogeneity and heteroscedasticity. As a result, it has the potential to provide more compelling evidence. Panel data results show positive impacts of effective AC characteristics on audit quality. Additionally, board members' average age may help enhance audit quality. The results clearly imply that company should form an AC with effective characteristics so that an AC is effective in monitoring audit quality to protect stakeholders. Table 24 summarises the findings of Models 1 and 2.

**Table 24:** List of Null Hypotheses Rejected and Not Rejected

No	Null Hypotheses	Results	Results
		(Model 1)	(Model 2)
H1	There is no relationship between audit quality	Rejected	Rejected
	and size of an AC.		
H2	There is no relationship between audit quality	Not Rejected	Not Rejected
	and AC independence		
H3	There is no relationship between diligence of	Not Rejected	Not Rejected

	an audit committee and audit quality.		
H4	There is no relationship between AC compe-	Rejected	Rejected
	tence and audit quality		
H5	There is no relationship between AC director-	Not Rejected	Not Rejected
	ships and audit quality.		
H6	There is no relationship between average AC	Rejected	Not Rejected
	tenure and audit quality.		
H7	There is a negative relationship between AC	Not Rejected	Rejected
	age and audit quality.		

### **5.6 Additional Analysis**

An indicator that the absolute value of discretionary accruals is higher than the sample median was used as further analysis. The indicator is equal to 1 if they were found to be higher than the sample median, otherwise 0. Models 3 and 4 used the indicator as the dependent variable. Random effect probit panel data regression was used given that the dependent variable is binary and fixed effect model is unavailable for probit panel data.

Model 3 demonstrates the results using the effective characteristics of an AC and control variables without effective board characteristics as the independent variables. These findings were summarised in Table 25. It is specified as follows:

ASAUDQ1<sub>*i*,*t*</sub> = 
$$\beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t}$$
  
+  $\beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t}$   
+  $\beta_8 \text{INSTITINVESTORS}_{i,t} + \beta_9 NAF_{i,t} + \beta_{10} NI_{i,t} + \beta_{11} \text{INHERENT}_{i,t}$   
+  $\beta_{12} \text{LEV}_{i,t} + \beta_{13} \text{SIZE}_{i,t} + \beta_{14} \text{AUDITOR}_{i,t} + \varepsilon_{i,t}$ 

 Table 25: Results of Model 3

	Co-efficient	Robust Std Error	p-values
LOGACSIZE	-0.33	0.492	0.504
ACIND	-0.34	0.260	0.184
ACCOM	-0.26	0.162	0.105
LOGACDIL	-0.21	0.224	0.344
ACDIRECT	-0.03	0.031	0.386
ACTENURE	-0.13	0.012	0.261
ACAGE	0.001	0.007	0.914
INSTITINVESTORS	0.001	0.001	0.027*
NAF	0.135	0.241	0.574
NI	0.160	0.182	0.379
INHERENT	0.506	0.222	0.023*
LEV	0.371	0.142	0.009**
SIZE	-0.268	0.096	0.005**

AUDITOR	-0.280	0.130	0.829
Constant	2.24	0.827	0.007**
Log pseudolikelihood	-1138		
Wald chi2 (21)	43.10		
Prob>chi2			0.0001***
N=1714			

According to the findings, AC variables are not significantly associated with discretionary accruals. For control variables, inherent risk and the number of institutional investors positively relate to it at p<0.05. Log value of total assets negatively relate to it at p<0.01. Leverage is positively significant at p<0.01. The model is found to be significant at p<0.001. Log pseudolikelihood is equal to -1138.

Model 4 depicts the results using both effective board and AC characteristics with control variables. These findings were summarised in Table 26. It is specified as follows:

$$\begin{aligned} \text{ASAUDQ1}_{i,t} &= \beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t} \\ &+ \beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t} + \beta_8 \text{LOGBSIZE} \\ &+ \beta_9 \text{BIND} + \beta_{10} \text{LOGBDILIGENCE} + \beta_{11} \text{BDIRECT} + \beta_{12} \text{BAGE} \\ &+ \beta_{13} \text{CUMBOADEQUITY} + \beta_{14} \text{DUALITY} + \beta_{15} \text{INSTITINVESTORS}_{i,t} \\ &+ \beta_{16} NAF_{i,t} + \beta_{17} NI_{i,t} + \beta_{18} \text{INHERENT}_{i,t} + \beta_{19} \text{LEV}_{i,t} + \beta_{20} \text{SIZE}_{i,t} \\ &+ \beta_{21} \text{AUDITOR}_{i,t} + \varepsilon i_{i,t} \end{aligned}$$

 Table 26: Results of Model 4

	Co-efficient	Robust Standard Error	p-values
LOGACSIZE	-0.48	0.526	0.364
ACIND	-0.67	0.276	0.015*
ACCOM	-0.26	0.163	0.105
LOGACDIL	-0.11	0.234	0.629
ACDIRECT	-0.199	0.053	0.703
ACTENURE	-0.007	0.012	0.569
ACAGE	0.0229	0.010	0.016*
BIND	0.768	0.65	0.237
LOGBSIZE	0.60	0.512	0.245
LOGBDILLIGENCE	-0.105	0.184	0.569
BAGE	-0.045	0.013	0.001**
BDIRCT	-0.118	0.096	0.217
CUMBOADEQUITY	0.068	0.072	0.349
DUALITY	0.213	0.091	0.020*
NI	0.149	0.176	0.400
INHERENT	0.029	0.22	0.195

NAF	0.106	0.24	0.658
SIZE	-0.245	0.098	0.012*
LEV	0.355	0.138	0.010**
INSTITINVESTORS	0.001	0.0006	0.025*
AUDITOR	-0.083	0.131	0.522
Constant	2.796	0.963	0.004**
Log pseudolikelihood	-1125.71		
Wald chi2 (21)	65.73		
Prob>chi2			0.0000***
N=1714			

As per the findings, the proportion of the independent non-executive directors on an AC negatively relates to the indicator at p<0.05. With regard to board characteristics, average board members'age negatively relates to it at p<0.01. The duality of CEO and chairman positively relates to it at p<0.05. For other control variables, the findings are similar to those of Model 3. The model is significant at p<0.001. Log pseudolikelihood is equal to -1125.71. The results may indicate that AC independence and average board members' age may improve their effectiveness in monitoring audit quality. However, average AC age may negatively impact their monitoring effectiveness. Further, the duality of CEO and chairman may impair their independence to reduce earnings management.

Table 27 summarises the results of the hypothesis testing for Models 3 to 4. Similarly, Table 28 summarises the results of panel data regression for Models 1 to 4.

**Table 27:** List of Null Hypotheses Rejected and Not Rejected (Probit Panel Data with Robust

 Standard Errors)

No	Null Hypotheses	Results	Results
		(Model 3)	(Model 4)
H1	There is no relationship between audit quali-	Not Rejected	Not Rejected
	ty and size of an AC.		
H2	There is no relationship between audit quali-	Not Rejected	Rejected
	ty and AC independence		
H3	There is no relationship between diligence of	Not Rejected	Not Rejected
	an audit committee and audit quality.		
H4	There is no relationship between AC compe-	Not Rejected	Not Rejected
	tence and audit quality		
H5	Average AC directorships are not signifi-	Not Rejected	Not Rejected

	cantly associated with audit quality.		
H6	Average AC tenure is not significantly asso-	Not Rejected	Not Rejected
	ciated with audit quality.		
H7	Average AC age is not significantly associ-	Not Rejected	Rejected
	ated with audit quality.		

# Table 28: Results of Models 1 to 4

Variables	Model 1	Model 2	Model 3	Model 4
	Coefficients	Coefficients	Coefficients	Coefficients
LOGACSIZE	-0.377**	-0.23*	-0.33	-0.48
	(0.005)	(0.041)	(0.504)	(0.364)
ACIND	-0.028	-0.014	-0.34	-0.67*
	(0.0636)	(0.804)	(0.184)	(0.015)
ACCOM	-0.121**	-0.1**	-0.26	-0.26
	(0.004)	(0.005)	(0.105)	(0.105)
LOGACDIL	-0.042	-0.019	-0.21	-0.11
	(0.520)	(0.747)	(0.344)	(0.629)
ACDIRECT	-0.016	0.001	-0.03	-0.199
	(0.248)	(0.856)	(0.386)	(0.703)
ACTENURE	-0.005*	-0.003	-0.13	-0.007
	(0.029)	(0.175)	(0.261)	(0.569)

ACAGE	-0.002	0.004*	0.001	0.0229*
	(0.238)	(0.040)	(0.914)	(0.016)
BIND		-0.067		0.768
		(0.405)		(0.237)
LOGBSIZE		-0.211		0.60
		(0.219)		(0.245)
LOGBDILLIGENCE		-0.018		-0.105
		(0.637)		(0.569)
BAGE		-0.014**		-0.045**
		(0.003)		(0.001)
BDIRCT		-0.054		-0.118
		(0.098)		(0.217)
CUMBOADEQUITY		0.087		0.068
		(0.208)		(0.349)
DUALITY		0.010		0.213*
		(0.588)		(0.020)

NI	0.145	-0.015	0.160	0.149	
	(0.278)	(0.220)	(0.379)	(0.400)	
INHERENT	0.085***	0.084***	0.506*	0.029	
	(0.000)	(0.000)	(0.023)	(0.195)	
NAF	0.0086	0.022	0.135	0.106	
	(0.820)	(0.491)	(0.574)	(0.658)	
SIZE	-0.081	-0.077	-0.268**	-0.245*	
	(0.097)	(0.058)	(0.005)	(0.012)	
LEV	0.033***	0.033***	0.371**	0.355*	
	(0.000)	(0.000)	(0.009)	(0.010)	
INSTITINVESTORS	0.0002*	0.0003**	0.001*	0.001*	
	(0.028)	(0.008)	(0.027)	(0.025)	
AUDITOR	0.010	0.093	-0.280	-0.083	
	(0.134)	(0.104)	(0.829)	(0.522)	
Constant	0.99*	1.515**	2.24**	2.796**	

	(0.019)	(0.004)	(0.007)	(0.004)
R-square (within)	0.789	0.7957		
R-square (between)	0.510	0.3741		
R-square (overall)	0.745	0.6973		
F-statistics	12971.41	16960		
P-value	0.0000***	0.0000***		
Log pseudolikelihood			-1138	-1125.71
Wald chi2 (21)			43.10	65.73
Prob>chi2			0.0001***	0.0000***
N=1714				

### **5.7 Robustness Check**

This section considers the sensitivity of the results to a variety of alternative measures of audit quality. The robustness checks generate similar results to those presented above by illuminating some identical patterns of statistical significance and signs in all checks. Notably, these tests use the log value of audit fees and choice of auditor as measures of audit quality. At the end of this section, the results of robustness check tests are compared to those of Models 1 to 4.

#### 5.7.1 Audit fees

Audit fees are determined by the costs associated with audit efforts and audit risks evaluated by EAs (Choi et al., 2008). Audit fees are specified as a function of the EAs' cost in performing the audit, expected litigation risks as well as normal profit (Asthana and Boone, 2012). As the AC serves as the corporate governance mechanism overseeing issues surrounding financial reporting integrity (CGPR, 2007), the AC may demand additional external audit effort from EAs in terms of scope and effort so that financial reporting leads to high credibility and audit quality. This demand increases the audit fees (Carcello, Hermanson and Ye, 2011). Zaman, Hudaib and Haniffa (2011) observed that AC effectiveness, independence, diligence and size positively relate to audit fees. Bruynseels and Cardinels (2014) found that social ties formed through the CEO's network reduced oversight quality, so that ACMs purchased less audit efforts, as evident in lower audit fees. Ho and Kang (2013) observed that AC size positively relates to audit fees in family

firms as well as non-family firms. Boo and Sharma (2008) took cognisance of the fact that an AC with more directorships required more audit resources in highly regulated industry. Krishnan and Visvanathan (2009) observed that AC demanded greater effort when they perceived greater risk; Vafeas and Waegelein (2007) and Hay (2013) meanwhile found positive linkages between audit fees and AC expertise. However, an effective AC may result in strengthening internal controls, which then leads to a reduced control risk for EAs (Zhang, Zhou and Zhou, 2007), so that the EA may charge lower audit fees. Some research found negative associations between audit fees and AC expertise (Krishnan and Visvanathan, 2009) or AC tenure (Chan, Liu and Sun, 2013). This is consistent with lower audit risk assessments.

Therefore, Models 5 and 6 were formed in order to examine the effects of AC characteristics on audit quality measured by the log value of audit fees as a measure of robustness checks. Model 5 were only inclusive of AC characteristics and other control variables without board characteristics. Model 6 included AC characteristics and control variables, including board characteristics. Fixed effect panel data regression was used to examine the relationships in Model 5 and Model 6. The findings of Models 5 and 6 are presented in Tables 29 and 30. Model 5 is specified as follows:

$$\begin{aligned} \text{LOGAFEE}_{i,t} &= \beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t} \\ &+ \beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t} \\ &+ + \beta_8 \text{INSTITINVESTORS}_{i,t} + \beta_9 NAF_{i,t} + \beta_{10} NI_{i,t} + \beta_{11} \text{INHERENT}_{i,t} \\ &+ \beta_{12} \text{LEV}_{i,t} + \beta_{13} \text{SIZE}_{i,t} + \beta_{14} \text{AUDITOR}_{i,t} + \varepsilon i_{i,t} \end{aligned}$$

# Table 29: Results of Model 5

Coefficients	P-value
0.135	0.026*
0.049	0.207
0.064	0.009**
-0.020	0.518
-0.023	0.000***
0.033	0.064
-0.0000	0.957
-0.130	0.000***
0.0223	0.000***
-0.199	0.112
0.280	0.000***
-0.0222	0.000***
	0.135         0.049         0.064         -0.020         -0.023         0.033         -0.0000         -0.130         0.0223         -0.199         0.280

INSTITINVESTORS	-0.0001	0.154
AUDITOR	0.050	0.077
Constant	1.475	0.427
R-square (within)	0.239	
R-square (between)	0.433	
R-square (overall)	0.440	
F-statistics	30.49	
P-value		0.0000***
N=1714		

Model 5 shows that the log value of AC size and AC expertise are positively associated with the log value of audit fees at p<0.05 and p<0.01 respectively, which indicates that a large AC and AC with financial expertise necessitates more efforts from EAs. However, ACMs' average directorships negatively relate to the log value of audit fees at p<0.001. As implication, EAs perceive that ACMs' directorships may help them acquire more experience in monitoring audit quality, so they perceived that audit risk is lower, and that audit fees are reduced. Net income normalised by lagged total assets is negatively associated at p<0.001, indicating that EAs perceive the company has low audit risk if a company has high profitability. Log value of total assets positively relate to audit fees at p<0.001, indicating the fact that a large company has more resources at its dis-

posal to appoint a high quality EA.

Model 6 includes board characteristics as control variables. The findings of Model 6 are presented in Table 30. Model 6 is specified as follows:

$$\begin{aligned} \text{LOGAFEE}_{i,t} &= \beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t} \\ &+ \beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t} + \beta_8 \text{LOGBSIZE} \\ &+ \beta_9 \text{BIND} + \beta_{10} \text{LOGBDILIGENCE} + \beta_{11} \text{BDIRECT} + \beta_{12} \text{BAGE} \\ &+ \beta_{13} \text{CUMBOADEQUITY} + \beta_{14} \text{DUALITY} + \beta_{15} \text{INSTITINVESTORS}_{i,t} \\ &+ \beta_{16} NAF_{i,t} + \beta_{17} NI_{i,t} + \beta_{18} \text{INHERENT}_{i,t} + \beta_{19} \text{LEV}_{i,t} + \beta_{20} \text{SIZE}_{i,t} \\ &+ \beta_{21} \text{AUDITOR}_{i,t} + \varepsilon i_{i,t} \end{aligned}$$

Variables	Coefficients	P-value
LOGACSIZE	0.113	0.108
ACIND	0.0536	0.185
ACCOM	0.060	0.017*
LOGACDIL	-0.0195	0.531
ACDIRECT	-0.0205	0.002**
ACTENURE	0.004	0.050

Table 30: Results of Model 6

ACAGE	-0.001	0.506
BIND	-0.074	0.281
LOGBSIZE	0.178	0.015*
LOGBDILLIGENCE	-0.012	0.588
BAGE	0.002	0.250
BDIRCT	-0.006	0.683
CUMBOADEQUITY	-0.02	0.279
DUALITY	-0.007	0.580
NI	-0.192	0.129
INHERENT	0.022	0.000***
NAF	-0.130	0.000***
SIZE	0.278	0.000***
LEV	-0.0213	0.000***
INSTITINVESTORS	-0.000	0.190
AUDITOR	0.047	0.101
Constant	1.300	0.645
R-square (within)	0.248	
R-square (between)	0.451	
R-square (overall)	0.456	
F-statistics	21.23	

P-value	0.000***
N=1714	

The results show that AC financial expertise is positively associated with the log value of audit fees at p<0.05. On the other hand, ACMs' average directorships negatively relate to log value of audit fees at p<0.01. Log value of board size positively relates at p<0.01. Non-audit fee ratio is negatively associated at p<0.001. Log value of total assets are positively associated at p<0.001. Leverage is negatively associated at p<0.001. These findings may indicate that AC financial expertise may help enhance audit quality, ACMs' average directorships may reduce the audit risk perceived by EAs and a large board demands greater efforts on the part of EAs.

### 5.7.2 Audit Choice

Big 4 auditors may have greater manpower and expertise to perform external audits for their clients, so that they are perceived to provide better audit quality (Mustafa, Che-Ahmad, Chandren, 2018; Lawrence, Minutti-Meza and Zhang, 2011; Al-Jimi, 2009; Choi et al., 2008). Also, if Big 4 auditors are unable to provide high quality audit, their reputation could be adversely affected. For this reason, they are required to perform high quality audit (Hsin and Chen, 2011; Francis and Wang, 2008). Gajevszku (2014) found that the existence of AC was positively associated with the appointment of Big 4 auditor. Hsu, Lin and Tsao (2017) observed that the presence of the AC was positively associated with the appointment of Big 4 auditors after controlling for family ownership. Similarly, Ho and Kang (2013) observed that AC size positively related to the appointment of Big 4 auditors in family and non-family firms. Therefore, Models 7 and 8 were formed to investigate the effects of AC characteristics on audit quality measured as the appointment of Big 4 auditors. Model 7 only includes AC characteristics and other control variables without board characteristics. Model 8 is inclusive of AC characteristics and control variables, including board characteristics. The findings are summarised in Table 31. Model 7 is specified as follows:

AUDITOR <sub>*i*,*t*</sub> = 
$$\beta_0 + \beta_1 \text{LOGACSIZE}_{i,t} + \beta_2 \text{ACIND}_{i,t} + \beta_3 \text{ACCOM}_{i,t} + \beta_4 \text{LOGACDIL}_{i,t}$$
  
+  $\beta_5 \text{ADIRECT}_{i,t} + \beta_6 \text{ACTENURE}_{i,t} + \beta_7 \text{ACAGE}_{i,t}$   
+  $+ \beta_8 \text{INSTITINVESTORS}_{i,t} + \beta_9 NAF_{i,t} + \beta_{10} NI_{i,t} + \beta_{11} \text{INHERENT}_{i,t}$   
+  $\beta_{12} \text{LEV}_{i,t} + \beta_{13} \text{SIZE}_{i,t} + \epsilon i_{i,t}$ 

 Table 31: Results of Model 7

Variables	Coefficients	P-value
LOGACSIZE	7.60	0.144
ACIND	0.60	0.770
ACCOM	0.24	0.861

LOGACDIL	-0.71	0.686
ACDIRECT	-0.11	0.676
ACTENURE	-0.011	0.924
ACAGE	0.007	0.933
BIND		
LOGBSIZE		
LOGBDILLIGENCE		
BAGE		
BDIRCT		
CUMBOADEQUITY		
DUALITY		
NI	0.53	0.419
INHERENT	0.026	0.847
NAF	0.262	0.821
SIZE	0.875	0.150
LEV	-0.030	0.810
INSTITINVESTORS	-0.002	0.753
Constant	-2.32	0.786
Prob>chi2	0.325	
Wald chi2 (20)	14.72	

Log likelihood	-165.8	
N=1714		

According to Model 7, the AC variables and control variables do not relate to the appointment of Big 4 auditors. The findings of Model 8 are summarised in Table 32. Model 8 is specified in the following manner:

AUDITOR <sub>*i*,*t*</sub> = 
$$\beta_0$$
 +  $\beta_1$ LOGACSIZE<sub>*i*,*t*</sub> +  $\beta_2$ ACIND<sub>*i*,*t*</sub> +  $\beta_3$ ACCOM<sub>*i*,*t*</sub> +  $\beta_4$ LOGACDIL<sub>*i*,*t*</sub>  
+  $\beta_5$ ADIRECT<sub>*i*,*t*</sub> +  $\beta_6$ ACTENURE <sub>*i*,*t*</sub> +  $\beta_7$ ACAGE <sub>*i*,*t*</sub> +  $\beta_8$ LOGBSIZE  
+  $\beta_9$ BIND +  $\beta_{10}$ LOGBDILIGENCE +  $\beta_{11}$ BDIRECT +  $\beta_{12}$ BAGE  
+  $\beta_{13}$ CUMBOADEQUITY +  $\beta_{14}$ DUALITY +  $\beta_{15}$ INSTITINVESTORS <sub>*i*,*t*</sub>  
+  $\beta_{16}NAF_{i,t}$  +  $\beta_{17}NI_{i,t}$  +  $\beta_{18}$ INHERENT <sub>*i*,*t*</sub> +  $\beta_{19}$ LEV <sub>*i*,*t*</sub> +  $\beta_{20}$ SIZE <sub>*i*,*t*</sub>  
+  $\epsilon_{i,t}$ 

### Table 32: Results of Model 8

Variables	Coefficients	P-value
LOGACSIZE	7.04	0.179
ACIND	-0.82	0.940
ACCOM	0.175	0.803
LOGACDIL	-0.105	0.891
ACDIRECT	0.365	0.003**
ACTENURE	-0.010	0.848
ACAGE	0.247	0.592
BIND	0.531	0.803
LOGBSIZE	1.55	0.605
LOGBDILLIGENCE	-1.12	0.156
BAGE	-0.034	0.444
BDIRCT	-0.48	0.020*
CUMBOADEQUITY	0.27	0.488
DUALITY	0.48	0.176
NI	0.218	0.678
INHERENT	0.107	0.649
NAF	0.399	0.678
SIZE	0.848	0.029*

LEV	-0.103	0.654
INSTITINVESTORS	-0.0016	0.280
Constant	-3.194	0.642
Prob>chi2	0.8895	
Wald chi2 (20)	12.71	
Log likelihood	-167.74	
N=1714		

Model 8 shows that average AC directorships positively relate to the appointment of Big 4 auditor at p<0.01, but board directorships negatively relate to it at p<0.05. The results of the robustness check have been summarised in Table 33.

 Table 33:
 List of Results of Models 5 to 8

	Model 5	Model 6	Model 7	Model 8
	LOGAUDITFEES	LOGAUDIT-	AUDITORS	AUDITORS
	(Coefficients)	FEES	(Coefficients)	(Coefficients)
		(Coefficients)		
LOGACSIZE	0.135*	0.113	7.60	7.04
	(0.026)	(0.108)	(0.144)	(0.179)
ACIND	0.049	0.0536	0.60	-0.82
	(0.207)	(0.185)	(0.770)	(0.940)
АССОМ	0.064**	0.060*	0.24	0.175
	(0.009)	(0.017)	(0.861)	(0.803)
LOGACDIL	-0.020	-0.0195	-0.71	-0.105
	(0.518)	(0.531)	(0.686)	(0.891)
ACDIRECT	-0.023***	-0.0205**	-0.11	0.365**
	(0.000)	(0.002)	(0.676)	(0.003)
ACTENURE	0.033	0.004	-0.011	-0.010

	(0.064)	(0.050)	(0.924)	(0.848)
ACAGE	-0.0000	-0.001	0.007	0.247
	(0.957)	(0.506)	(0.933)	(0.592)
BIND		-0.074		0.531
		(0.281)		(0.803)
LOGBSIZE		0.178*		1.55
		(0.015)		(0.605)
LOGBDILLIGENCE		-0.012		-1.12
		(0.588)		(0.156)
BAGE		0.002		-0.034
		(0.250)		(0.444)
BDIRCT		-0.006		-0.48*
		(0.683)		(0.020)
CUMBOADEQUITY		-0.02		0.27
		(0.279)		(0.488)
DUALITY		-0.007		0.48

		(0.580)		(0.176)
NI	-0.130***	-0.192	0.53	0.218
	(0.000)	(0.129)	(0.419)	(0.678)
INHERENT	0.0223***	0.022***	0.026	0.107
	(0.000)	(0.000)	(0.847)	(0.649)
NAF	-0.199	-0.130***	0.262	0.399
	(0.112)	(0.000)	(0.821)	(0.678)
SIZE	0.280***	0.278***	0.875	0.848
	(0.000)	(0.000)	(0.150)	(0.029)
LEV	-0.0222***	-0.0213***	-0.030	-0.103
	(0.000)	(0.000)	(0.810)	(0.654)
INSTITINVESTORS	-0.0001	-0.000	-0.002	-0.0016
	(0.154)	(0.190)	(0.753)	(0.280)
AUDITOR	0.050	0.047		
	(0.077)	(0.101)		
Constant	1.475	1.300	-2.32	-3.194

	(0.427)	(0.645)	(0.786)	(0.642)
R-square (within)	0.239	0.248		
R-square (between)	0.433	0.451		
R-square (overall)	0.440	0.456		
F-statistics	30.49	21.23		
Wald chi2 (20)			14.72	12.71
P-value	0.0000***	0.0000***	0.325	0.8895
Log pseudolikelihood			-165.8	-167.74

\* p-value < 0.05 \*\* p-value < 0.01 \*\*\* p-value < 0.001

In summary, the findings reveal that AC size is important in enhancing audit quality. In Models 1, 2 and 5, AC size is found to negatively relate to discretionary accruals. In Model 5, it is found to positively relate to audit fees. A large AC may be more effective in constraining earnings management, demanding greater external audit effort.

AC independence does not significantly relate to discretionary accruals, audit fees or appointment of Big 4 auditors in all models with the exception of Model 4. Although these results are insignificant, the signs of coefficients point out the fact that independent ACMs may reduce earnings management, demand more external effort and appoint Big 4 auditors.

Furthermore, AC financial expertise is negatively associated with earnings management in Models 1 and 2 and positively linked with audit fees in Models 5 and 6. However, it is not significantly associated with the appointment of Big 4 auditors in Models 7 and 8, potentially indicating that AC expertise may help reduce earnings management and demand greater additional efforts on the part of EAs. However, ACMs who have the financial expertise may perform their oversight role effectively like a Big 4 auditor, implying that they may not need to appoint a Big 4 auditor for external audits.

AC diligence is not associated with discretionary accruals in Models in any of the models. However, in Models 1 to 4, the negative signs show that AC meetings may indicate that they may help to enhance audit quality although the effects are not significant. ACMs' average directorships are not found to relate to discretionary accruals in Models 1 to 4, but negatively relate to audit fees in Models 5 and 6. The directorships positively relate to the appointment of Big 4 auditors in Models 8. This may indicate that EAs may perceive that ACMs with more directorships may have greater experience in overseeing audit quality, so that they charge lower audit fees to their clients. ACMs with more directorships amy be inclined to appoint the Big 4 auditors because they have more reputation risk. In order to protect their reputation, they are inclined to appoint high quality auditor.

ACM's tenure is significantly associated with lower discretionary accruals in Model 1. This may support the argument that long tenured ACMs have gained experience and knowledge of the operations of a company, so their monitoring effort becomes more effective.

ACMs' average age positively relates to discretionary accruals in Model 2 and 4 but does not relate to audit fees nor the appointment of Big 4 auditors in Models 5 to 8. This may imply that senior ACMs may have less energy to perform their roles of monitoring. Further, they may have difficulities in updating their knowledge and keeping abreast of changing environment of the companies or technology. Therefore, their monitoring effectiveness is reduced.

For board characteristics, board members' ages are found to negatively relate to discretionary accruals in Models 2 and 4, but are neither associated with audit fees in Models 5 and 6 nor the

appointment of Big 4 auditors in Models 7 and 8. As an implication, board members' age may enable them to have higher status in the company when they monitor managers and even ACMs. Thereby, they have more power to request information for overseeing managers or require them to make changes. The effects of ACMs' age and board members' age are different: the higher the ACMs' age the lower the audit quality, but it is opposite in the case of board members. Firstly, a board is bigger than an AC. Therefore, on average although some board members are older, they may have other younger members to compensate for their reduced energy. Therefore, taken as a group, the effectiveness of monitoring has not been reduced, but increased. For example, the senior board members may share their experience of monitoring financial reporting with junior members on the board, so that they can then implement changes suggested by the senior member. However, it is difficult for a AC to do so because they are usually smaller than a full board. Secondly, although ACMs are old, they may not have power because of the size of the AC. However, a full board which is large and have high status due to seniority can deter managers to engage in earnings management.

However, their age does not relate to audit fees and appointment of Big 4 auditors. Since a full board has more power and higher status, it serves as an effective monitoring systmes, this is known to have substitution effects for EAs' effort and the appointment of Big 4 auditors. Consequently, the companies do not require EAs to put in additional efforts in external audits or appoint Big 4 auditors.

Duality of CEO and chairman positively relates to discretionary accruals in Model 4 but does not relate to audit fees or the appointment of Big 4 auditors. This may indicate that the duality impairs independence, which, in turn, means that CEO does not require additional efforts from EAs or appoint Big 4 auditors. As a result, managers may find it easier to manipulate earnings. The CEO may have the power to influence the companies to demand lesser effort from EAs or choose to appoint non-Big 4 auditors.

With regard to control variables, net income normalised by lagged total assets is found to negatively relate to audit fees in Model 5. because if a company has higher net income, EAs may perceive that managers are less likely to manipulate earning due to facing lesser pressure. Since audit risk is lower, EAs may charge lower audit fees.

Inherent risk is positively associated with discretionary accruals in Models 1, 2 and 3, but neither relates to audit fees nor the appointment of Big 4 auditors – indicating that inherent risk provides managers with more opportunities to engage in earnings management. If companies have high inherent risk, audit risk is perceived to be high, so EAs may charge higher audit fees.

Firm size is not found to relate to discretionary accruals in Models 1 to 2, but negatively relate to them in Model 3 and 4. It also positively relates to audit fees in Models 5 and 6. This indicates that a large company may have more resources to monitor internal control systems, so managers

may find it more difficult to manipulate earnings. Moreover, higher audit fees are paid to compensate for EAs' efforts and resources to audit large companies.

Leverage is found to positively relate to discretionary accruals in Models 1 to 4. This indicates that managers are under high pressure to manipulate earnings if companies have high levels of leverage. In Models 5 and 6, leverage negatively relates to log value of audit fees, indicating the fact that companies with high leverage are less likely to demand auditors' effort so that they can manage the earnings as shown in Models 1 to 4.

The number of institutional investors positively relate to discretionary accruals in Models 1 to 4. They are not associated with audit fees or the appointment of Big 4 auditors. It may be noted that although institutional investors may serve as another monitoring mechanism to monitor audit quality, they may intensify pressure on managers to maintain high levels of profitability, so that they are more likely to manipulate earnings upward since the board is responsible for the overall performance of companies.

# **5.8.** Chapter Summary

This chapter answers Research Questions 1:

•RQ 1: what are the impacts of AC characteristics on audit quality in Hong Kong?

This chapter investigates the impact of various AC characteristics on audit quality, which is denoted by discretionary accruals. It commences by presenting the descriptive statistics for the sample. The regression results are then presented in order to elucidate the impact of various AC characteristics on audit quality. The findings reported in discretionary accrual analysis shows that AC size, expertise, tenure and age are key determinants of audit quality. According to the analysis of audit fee, a AC with financial expertise demands additional audit efforts on the part of EAs. More AC directorships enable EAs to perceive that companies have lower audit risk, thereby reducing audit fees. Furthermore, ACMs with more directorships are likely to appoint Big 4 auditors in order to protect their reputation. Viewed collectively, an AC with effective characteristics is essential for enhancing audit quality so that earnings management can be constrained.

# CHAPTER 6 DISCUSSION (ARCHIVAL MODELLING STUDY)

# **6.1 Introduction**

This chapter discusses the findings mentioned in Chapter 5. According to its findings, AC size, expertise, diligence and age are positively associated with audit quality that is measured by the absolute value of discretionary accruals. This section compares the findings of this study to extant studies concerning AC characteristics to demonstrate their implications and relevance to-wards the improvement of audit quality. Sections 6.2 to 6.8 discuss the findings of seven AC characteristics as well as their implications on audit quality. Section 6.9 summarises the entire chapter.

## 6.2 AC Size

AC size is found to negatively relate to discretionary accruals in Models 1 and 2 This result is consistent with the stance adopted in prior studies. For instance, in a study examining the effects of AC structure on earnings management in Asia Pacific, Yasser and Al Mamun (2016) observed that a larger AC is more effective in reducing earnings management. Similarly, in a study that investigated the relationships between AC characteristics and earnings restatement, Lin, Li and Yang (2006) found a negative linkage between AC size and earnings restatement. The findings in this study also find supports in Ayemere and Elijah (2015), who investigated the impacts of AC on the quality of financial statement in Nigeria. Ayemere and Elijah (2015) observed that AC

size had positive impacts on the quality of financial reporting. When examining the impacts of AC quality on financial reporting quality measured as natural log of the absolute value of abnormal accrual in India, Shankaraiah and Amiri (2017) found that AC size are negatively associated with discretionary accruals. Correspondingly, in a study of examining the relationships between AC characteristics and auditor choice and audit fees in family firms, Ho and Kang (2013) observed that AC size positively relates to the appointment of Big 4 auditors and audit fees in family and non-family firms.

This study provides evidence that a larger AC may significantly enhance audit quality so that earnings management gets constrained. In Hong Kong, AC size is essential for safeguarding the stakeholders' interest by providing more oversight resources on audit quality.

### **6.3 AC Independence**

Unlike Model 4, AC independence is not found to significantly relate to discretionary accruals in Models 1 to 3. This result is inconsistent with the findings of extant research which found that AC independence positively relates to audit quality. To illustrate, Leung, Richardson and Jaggi (2014) investigated whether the relationships between the board and AC independence and firm performance are moderated by the concentration of family ownership. They observed a positive linkage between the independence of the AC and firm performance for non-family firms. In a study that investigated whether AC independence in varying institutional settings affects the market reaction measured by abnormal stock returns variance and abnormal trading volume, Poretii, Schatt and Bruynseels (2018) observed that the market reactions to earnings announcements were significantly larger when the AC enjoys greater independence in countries with weak institutional settings.

Bruynseels and Cardinaels (2014), in their study that investigated the effects of the social relationships between ACMs and CEOs on oversight quality of an AC, observed that social ties formed through the CEO's friendship network adversely affected oversight quality. They observed that EAs in these companies were less likely to report internal control deficiencies or issue going-concern opinions for firm in distress under the influence of personal relationships. In a study investigating the effectiveness of the AC on managers' tendency to manipulate earnings forecast guidance downward, Ho, Liu and Wang. (2014) observed that AC independence negatively relates to downward earnings forecast guidance after post-SOX period. In an experiment that evaluated the impacts of AC independence and expertise on the extent to which ACMs support the position of EAs when they have disagreements with managers, DeZoort and Salterio (2001) observed that serving as both board and senior management encouraged ACMs to support managers' position, so that AC independence is impaired to reduce oversight efforts. In a questionnaire survey examining the relationships between AC characteristics and informal interactions taking place between ACs and internal audit functions as well as their effects on internal audit quality, Zaman and Sarens (2013) observed that AC independence positively related to informal interactions, which, in effect, positively related to the quality of internal audit function.

In summary, this study does not provide credible evidence that ACMs' independence enhances ACMs' freedom for monitoring audit quality in Hong Kong. This may be attributed to the classification of independence. The HKEx classification of independence may not capture certain relationships between ACMs and managers. For example, they are not required to report their friendships in the annual report. For this reason, the reported levels of independence may not truly reflect their independence.

# 6.4 AC Expertise

AC expertise is found to negatively relate to discretionary accruals in Models 1 and 2. The results are consistent with the findings of prior research. For instance, in a study examining the association between voluntary AC characteristics and incentives facing directors on the AC and earnings management in New Zealand, Vineeta et al. (2014) concluded that an independent AC with financial expertise reduces the probability of earnings management. The findings in this study are also consistent with the observations made by Lin et al. (2009), who investigated whether the regulations and recommendations in China and Hong Kong have been effective in regulating the quality of reported earnings. Lin et al. (2009) observed that AC financial expertise were important factors in reducing earnings management. Similar results were reported by Wong (2011), who examined the effects of AC characteristics and family control on earnings management after the listing rule was revised on 31 March 2004. He noted that AC financial expertise was a significant factor in lowering earnings management in Hong Kong. Cohen, Hoitash and Krishnamoorthy (2014), in their study that investigated the effects of AC industry expertise on the effectiveness of AC in overseeing the financial report and auditing process, noted that ACMs performed better to reduce restatement as well as discretionary accruals if they happen to be industry and accounting experts. In their study of investigating whether ACMs' accounting and legal expertise help enhance the effectiveness of oversight role of the audit committee in East Asia, Woidtke and Yeh (2013) found that firms which had financial experts and legal experts on the AC had more transparent earnings. Similarly, Zalata, Tauringana and Tingbani (2018) observed in a study of investigating the effect of AC financial expertise and gender on earnings management in the US that female directors with financial expertise were negatively associated with earnings management.

In a study that examined the effects of financial expertise and status of AC on earnings management, Badolato, Donelson and Ege (2014) noted that ACs have both financial expertise and high relative status that helps deter earnings management. In another study which examined whether individual AC task-specific experience affects group financial reporting outcomes, Shepardson (2018) posited that ACMs with goodwill write-off experience enhanced their oversight role of financial reporting by identifying goodwill impairments and requiring managers to write off goodwill. Similarly, in an experiment that examined whether ACMs' oversight experience made judgments more professional than their counterparts without such experience, DeZoort (1998) found that that auditing experts made a judgment as professional as audit experts. In the interviews that explored the conduct of the AC in audit quality and elements affecting the effectiveness of its oversight, Sulaiman (2017) observed that limited understanding of the AC, particularly the chairman of the AC concerning technical auditing and accounting knowledge, diminished the quality of discussions concerning important issues affecting audit quality.

In summary, this study provides evidence that ACMs' financial expertise enables them to improve audit quality because financial experts should have a better understanding of the technical aspects of accounting procedures, recognition criteria, internal control systems as well as valuation of assets and liabilities (Krishnan, 2005), so that they may be more effective and efficient in improving audit quality.

#### 6.5 AC Diligence

According to this study, AC diligence does not relate to discretionary accruals in Models 1 to and 4. These results are not consistent with prior research. For instance, Soliman and Ragab (2014) noted in a study of investigating the effects of AC characteristics on earnings management in Egypt that the number of AC meetings negatively related to earnings management measured as discretionary accruals. The findings of Soliman and Ragab (2014) are similar to those of Hamdan, Mushtaha and Al-Sartawi (2013), who concluded that the number of AC meetings help enhance earnings quality. Further, in a questionnaire survey that investigated the effects of AC characteristics on the perceptions of the effectiveness of implementing internal audit recommendations, Alzeban and Sawan (2015) pointed out that the number of AC meetings between the AC and Chief Audit Executives positively related to the perceptions of the effectiveness of implementing recommendations that were proposed by Chief Audit Executives, so audit quality is expected to be higher.

Larv and Taylor (2012) noted in a study of investigating the association between AC characteristics and the effectiveness of ACMs' role in Australia that an AC which had at least four meetings in a year was negatively associated with non-audit fees ratio. Similarly, in a study investigating the relationship between governance quality and auditor remuneration in the UK, Zaman, Hudaib and Haniffa (2011) observed that AC diligence positively related to natural logarithm of audit fees. Correspondingly, Munsif, Raghunandan and Dasaratha (2013) concluded in a study of examining the early warnings of internal control problem before year-end external audit that early warning was more likely for firms with more frequent AC meetings. Mohammad (2018) observed in a study investigating the AC's characteristics and its influence over financial restatement in Malaysia that the number of AC meetings negatively related to financial restatements. In a similar vein, Owens-Jackson, Robinson and Shelton (2009) observed in their study of investigating the effects of AC characteristics on managerial ownership and leverage on fraudulent financial reporting that the likelihood of fraudulent financial reporting negatively related to the number of AC meetings.

In summary, this study does not support the viewpoint that diligent ACMs have more meetings to discuss issues relating to accounting and control-related matters, so that audit quality can be improved in Hong Kong.

## **6.6 AC Directorships**

This study does not find significant linkage between average AC directorships and discretionary accruals in Models 1 to 4. The results are inconsistent with the prior research in either the first or second stream of arguments presented in Section 3.6. The first stream of research concurs that ACMs with more directorships may enhance audit quality. Boo and Sharma (2008) noted in a study relating to AC characteristics and audit fees in regulated industries that an AC with more directorships required more audit resources in a highly regulated industry.

The second stream of research suggests that ACMs with excessive directorships may be too busy performing their oversight role, thus lowering audit quality. For example, Sharma and Iselin (2012) observed in a study that examined whether more directorships make them too busy providing their efforts to perform their oversight role using experimental study that compared two samples that ACMs with multiple directorships were less effective in monitoring misstatement. Similarly, in a study examining the effects of various AC characteristics on audit quality, Habbash, Sindzingue and Salama (2012) observed that ACMs' average number of outside directorships positively related to downward discretionary.

In another study that evaluated the effects of interactions of AC expertise as well as other AC characteristics on accrual quality, Dhaliwal, Naiker and Navissi (2010) observed that ACs with fewer directorships were found to be more effective in enhancing accruals quality. In a study that investigated how the number of AC chair positions as well as other AC financial expertise positions held by the AC chairman and AC financial experts affects their ability to oversee a company's financial reporting process, Tanyi and Smith (2015) found a negative association between financial reporting quality, the number of AC chair positions and other AC financial expertise positions that were held by the AC chairman or AC financial experts.

In summation, this study does not find support for the viewpoint that ACMs' directorships may help them gain more oversight experience or become familiar with managers, thus impairing their independence.

# 6.7 AC Tenure

This study finds significant negative relationship between average AC tenure and discretionary accruals in Model 1. The results are consistent with prior research which suggests that AC tenure may help improve audit quality. The first stream of research concurred with the view that long-tenured ACMs may gain more knowledge and experience in monitoring audit quality of a particular company. For example, Chan, Liu and Sun (2013) examined the effects of AC and board tenure on audit fees. They observed that audit fees were negatively associated with the propor-

tion of board directors with long tenure on the independent AC, suggesting that long AC tenure increased audit quality. This led to lower audit risk, thereby reducing audit fees. Wilson (2017) noted in a study of examining whether director tenure increases or decreases AC effectiveness that discretionary accruals were negatively associated with the proportion of long-tenured ACMs. They also observed that the presence of even one long-tenured ACM lowers earnings management. Similarly, Sun and Liu (2010) concluded in a study of examining whether ACMs' tenure on the independent AC affects the AC effectiveness in oversight of financial reporting that the proportion of long tenure directors on the independence of AC was negatively associated with discretionary accruals.

The findings of Sun and Liu (2010) were in line with the observations made by Ghosh, Marra and Moon (2010) who investigated the effects of AC characteristics on restraining earnings management in pre-SOX and post-SOX periods. Ghosh, Marra and Moon (2010) found that AC tenure was negatively associated with earnings management. In a study that investigated the effects of an AC on restraining quarterly earnings management, Yang and Krishnan (2005) observed that quarterly earnings management negatively related to ACMs' average tenure. Aldaman et al. (2012) noted in a study that investigated the effects of AC characteristics on firm performance during the Global Financial Crisis that a long-tenured chairman on the AC enhances firm performance.

Meanwhile the findings do not support the viewpoint that longer AC tenure may impair ACMs' objective oversight role because audit quality may be reduced as they become familiar with managers. To illustrate, Vineeta and Errol (2012) investigated the effects of their multipledirectorships and tenure on financial misstatements, and found that AC tenure positively related to financial misstatement. Singhvi, Rama and Barua (2013) observed in a study examining the impacts of the characteristics of ACMs who departed from the firms on market reactions that the market reaction was significantly negative for the departure of short-tenured directors. This was not the case with long-tenured directors. In a study investigating the effects of ACMs' tenure and directorships on meeting analyst forecast, Rickling (2014) observed that long-tenured ACMs were positively associated with the probability of a firm barely meeting analyst forecast.

In summary, the study finds evidence that ACMs may acquire more knowledge and experience of monitoring financial reporting and audit process in a company over a period of time.

## 6.8 AC Age

This study finds evidence that average AC age positively relates to discretionary accruals in Models 2 and 4. The results are inconsistent with the findings of previous research. For example, Dao, Huang and Zhu (2013) observed in a study of examining the effects of ACMs' age on cost of capital that there was a positive association between under-pricing and the age difference of independent directors on an AC. Similarly, Qi and Tian (2012) concluded in a study investigating the effects of ACMs' personal characteristics on firms' earnings management that ACMs'

age may help enhance audit quality, thus constraining earnings management. Whilst examining the effects of board members' age on corporate financial fraud, Xu, Zhang and Chen (2018) observed that the age difference between board members' age and CEO's age moderated the correlation between board members' age and occurrence of financial fraud. In turn, this indicates that if board members are older than CEO, the effects of board age on the occurrence of financial fraud are stronger. As a case in point, Mustafa, Che-Ahmad and Chandren (2018) examined how ownership concentration affects the oversight role of corporate board through the quality of audit services. They observed that board members' age positively related to the appointment of Big 4 auditors as well as industry specialist EAs.

In summary, this study provides evidence that older ACMs may reduce audit quality because they may have less energy to perform their oversight role or have difficulities of keeping a breast of changing environment of companies or technology.

#### **6.9 Chapter Summary**

This chapter compares the findings of this study to earlier studies. The findings are largely consistent with those of previous research studies. This provides evidence that a larger AC size provides more manpower to perform their oversight role. ACMs' expertise may enable them to have greater technical knowledge to monitor audit quality. Long tenured ACMs may gain more knowledge of the operations of a company. Therefore, these AC characteristics assume significance in the context of improving the audit quality of listed companies in Hong Kong. However, caution should be taken in regard to senior ACMs on an AC because they may reduce audit quality.

# CHAPTER 7 LITERATURE REVIEW (QUESTIONNAIRE SURVEY STUDY)

### 7.1 Introduction

Chapters 3 to 6 relate to the archival modelling study that investigated the relationships between AC characteristics and audit quality in Hong Kong. However, it does not provide insights into the effects of EAs' trust in ACMs on their interactions, which may assume significance in improving audit quality. Their trust in ACMs may influence the effectiveness and efficiency of audit process as well as the overall reliability of audit report. The effectiveness and efficiency of audit process may be enhanced because their trust in ACMs may encourage them to discuss audit issues with ACMs, such as audit plan, unpresentable tests, risk assessment and managers' integrity. Developing an understanding of these issues may help enhance audit quality. The reliability of audit report may be enhanced because they may seek more information to determine the scope of audit and provide more useful recommendations beyond the requirements of audit standards.

Since the reliability of audit report and effectiveness of audit process are some of the key components of audit quality as discussed in Section 2.4.2, the improvement in these are likely to enhance audit quality. As demonstrated in Section 3.5, Sulaiman (2017) observed that the effectiveness of an AC is affected by the quality of their relationship, interactions and communication in the interviews. It was concluded that informal process is important for them to discuss difficulties encountered during the external audit and discuss sensitive concerns that cannot be done in formal meetings. Therefore, a high level of trust in ACMs on the part of EAs may facilitate interactions between them, leading to improved performance in external audit. Consequentially, the effectiveness and efficiency of an external audit may be enhanced; as a result, audit quality is expected to be high. Hence, it is important to explore how EAs' trust in ACMs affects their interactions. This, in turn, may impact audit quality.

Apart from the positive effects on audit quality as expected above, since trust is multidimensional, trust may have negative effects on audit quality. For instance, if EAs place too much trust on ACMs, the ACMs may reduce their efforts to question managers and monitor internal control systems of a company and EAs may reduce their efforts to question ACMs. However, since they have common goals to enhance audit quality to protect the financial statement users' interests, so it is more likely that trust will facilitate their interactions rather than reduce their effort. Furthermore, since information is very transparent in Hong Kong, if ACMs abuse EAs' trust, and if this results in low audit quality and misstated financial statements, ACMs' reputation will be damaged. This reputation risk may encourage ACMs to cooperate with EAs by using EAs' trust appropriately. Therefore, this study focuses on the positive effects of trust on interactions between them.

This chapter begins by discussing the definitions of trust and is followed by a review of prior studies which examined the factors that may influence the levels of trust and the relationships

between the levels of trust and actors' performance. It ends with a summary of the main points discussed in the study.

## 7.2 Definitions of Trust

In the parlance of psychology, the definition of trust mainly focuses on interpersonal trust. In psychology, trust is perceived to be a learned behaviour as opposed to an inherent personality trait (Rotter, 1967) and established from past experiences or interactions (Rempel, Holmes and Zanna, 1985). If actors perceive that they cannot receive the expected gains through dependence on one another, or if they feel that they will be taken advantage of, trust may not be developed.

Rempel, Holmes and Zanna (1985) suggested that trust is established based on past experience and future expectation. They concurred that trust refers to the expectation that a partner can be relied upon to be responsive to each another's needs as well as to promote one another's best interests, both now and in the future. Rotter (1967, p.444), who defined trust in accordance with the reliability of others, argued that trust is "an expectancy held by an individual or a group that the word, promise, verbal, or written statement of another individual group can be relied on". His definition ignored the dependence on one another and only focused on the accuracy of the information or consistency of others' behaviour.

Trust is only established in a situation where dependence on each another is high because an actor may be able to achieve a goal by himself or herself without trusting one another if dependence is not important. In this regard, Deutsch (1973) suggested that trust is an expectation of gain through dependence on the partner. Although Deutsch (1973) agreed that trust tends to develop in a situation with high dependence, he ignored that a situation must involve risk for trust to develop.

In risky situations, trust develops only if partners do not take advantage of one another even if they have the opportunity to do so. Colquitt et al. (2012, p.1) defined trust as "confident and positive expectations about the words, actions, and decisions of another in situations entailing risk." On the other hand, Robinson (1996, p.576) concurred that trust reduces opportunistic behaviour by defining trust as person's "expectations, assumptions, or belief about the likelihood that another's future actions will be beneficial, favourable, or at least not detrimental to one's interests". If trust develops, partners may not take advantage of one another because their actions will not be detrimental to the interests of one another. Psychologists opine that trust is a positive expectation of one another to behave in a manner which is beneficial or at least not detrimental to one another in a situation where the levels of risk or dependence on one another remains high.

In the field of management, actors may place trust in each another from different organisations; it is necessary that the actors from different organisations have competence, goodwill and integrity. Actors are unable to trust each other if they lack the competence to perform, intention to perform or honesty to behave positively. Barber (1983, p.165) poignantly observed that trust involves competence and integrity by suggesting that "trust is the expectation of technically competent

performance and of fiduciary obligation and responsibility". Correspondingly, Ring and Ven de Ven (1992) defined trust as the amount of confidence in each other's goodwill. Trustors can rely on trustees due to high competence, goodwill and integrity. In this regard, Hill et al. (2009) stated that trust exists when individuals can rely on each other to voluntarily recognise and protect the interests and rights of their firms.

The definitions of trust by Barber (1983) and Ring and Ven de Ven (1992) gave insights into how trust is formed, but ignored the scenarios where trust can manifest between two organisations. Ireland and Webb (2007) emphasised that trust develops in a situation where interdependence and vulnerability exists between different organisations. They opined that trust refers to the will-ingness to accept vulnerability based upon positive expectations of partner behaviour. Predictability, dependability and faith are the three key components of trust. They argued that when there is trust, a firm does not fear its partner's actions, because both parties depend on each other to achieve a common purpose. Lui and Ngo (2004) concurred that trust is the expectation of a partner fulfilling a collaborative role in a risky situation, as well as the reliability of both partners' intention to perform and ability to do so.

Puranam and Vaneste (2009) suggested that trust refers to the expectation that a partner will not behave opportunistically, even when the victim cannot detect such behaviour. Zaheer, McEvily and Perrone (1998) noted that trust is the expectation that an actor can be relied upon to fulfil their obligations, will behave in a predictable manner and will act and negotiate fairly when the possibility of opportunism is present. Deutsch (1962) emphasised that even if trustors cannot control the situation in which they may be taken advantage of, they are still assured by a firm belief that trustees will not behave opportunistically. He defined trust as the actions that increase one's vulnerability to another whose behaviour is not under one's control in a scenario where penalty one suffers if another abuses the vulnerability is greater than the benefit one acquires if another does not abuse that vulnerability.

In the field of management, trust definitions emphasised the antecedents of trust and the situation where trust develops between two organisations. Trust can be formed in the wake of competence, goodwill and integrity of actors from different organizations; it can be established in a situation where dependability and vulnerability exist. An external audit involves vulnerability. If the audit failure occurs, EAs and ACMs may be sued or lose their reputation. It involves interdependence because they depend on and cooperate with one another in order to obtain reliable information for the purpose of high quality audit.

Since this research examines the effects of EAs' trust in ACMs on audit quality, I adopt the definition of Ireland and Webb (2007) because an external audit involves vulnerability, dependability and positive expectation.

Table 34 highlights prior studies about definitions of trust in the literature.

 Table 34: Definitions of Trust

Authors	Dimensions	Definitions
Rempel, Holmes	Promotion of interests	Trust denotes the expectation that a partner
and Zanna (1985)		can be relied upon to be responsive to one's
		needs and to promote one's best interests,
		both now and in the future.
Barber (1983)	Competence, fiduciary	Trust refers to the expectation of technically
	obligation and respon-	competent performance and of fiduciary obli-
	sibility	gation and responsibility.
Ring and Ven de	Goodwill	Trust is the confidence in the other's good-
Ven (1992)		will.
Hill et al. (2009)	Reliability	Trust exists when reliability occurs so that
		other parties can be relied upon to voluntarily
		recognise and protect the interests and rights
		of a firm.
Rotter (1971)	Reliability	Trust is an expectancy held by an individual
		or a group that the word, promise, verbal, or
		written statement of another individual group
		can be relied upon.
Zaheer, McEvily	Predictability and act-	Trust is the expectation that an actor can be

and Perrone	ing and negotiating in a	relied upon to fulfil obligations, will behave
		rened upon to runn congutons, win centre
(1998)	fair manner	in a predictable manner and will act and nego-
		tiate fairly when the possibility of opportun-
		ism is present.
Robinson (1996)	Positive expectations	Trust denotes the expectations, assumptions,
		or beliefs about the likelihood that another's
		future actions will be beneficial, favourable or
		at least not detrimental to one's interests.
Deutsch (1973)	Dependence	Trust is an expectation of gain through de-
		pendence on the partner.
Colquitt et al.	Positive expectations	Trust refers to positive expectations about the
(2012)	and risk	words, actions, and decisions of another in
		situations entailing risk.
Deutsch (1962)	Risk and vulnerability	Trust comprises of actions that increase one's
		vulnerability to another whose behaviour is
		not under one's control in a situation where
		penalty one suffers if the other abuses that
		vulnerability is greater than the benefit one
		gains if the other does not abuse that vulnera-
		bility.

Lui and Ngo	Collaborative role in a	Trust refers to the expectation of different par-
(2004)	risky situation	ties to fulfil their collaborative role in a risky
		situation.
Purana, and Van-	Undetectable actions	Although actions cannot be detected by vic-
neste (2009)		tims, trust forms an expectation that an ex-
		change partner will not behave opportunisti-
		cally.
Ireland and Webb	Acceptance of vulnera-	Trust refers to the willingness to accept vul-
(2007)	bility, positive expecta-	nerability based on positive expectations of
	tions, predictability,	partner behaviour. Predictability, dependabil-
	dependability and faith	ity and faith are the three key components of
		trust.

# 7.3 Antecedents of Trust in Auditing

Section 7.2 reviews trust definitions, so I can firstly define trust in the context of auditing. Sections 7.3 and 7.4 review relevant studies on the antecedents of trust in order to explore the factors that may influence trust. This assumes significance because ACMs and EAs can understand how they build trust among one another. Although no literature thus far has suggested how trust is established between these two entities, there are studies that discuss how trust is established between EAs and their clients' managers. These factors are expected to help explain the factors that may influence their trust in ACMs.

In a study that explored the factors of trust between EAs and clients' managers, Shaub (1996) recognised the importance of three components: past experience, situational factors and dispositional factors. He formed 11 research hypotheses about the factors that influenced trust between them. These factors were EA tenure, past inaccuracies, quality of communication, industry type, clients' gender and EA's evaluation of the clients' independence. Shaub (1996) used questionnaires and experiments during the course of this study and manipulated the levels of variables as high or low in his experiments. For example, the quality of communication. The level of trust was indicated in the scored items in the questionnaires. This sample had as many as 119 managers or senior managers. He found that EA tenure, past inaccuracies and quality of client-auditor communication had a significant impact on their trust in clients' managers.

Likewise, Shaub and Lawrence (1996) conducted a study to examine the factors that influence the scepticism between clients' managers and EAs. They contacted the participants at the firm's national training centre to fill out questionnaires after reading the hypothetical cases. Nine cases were used with a modification of the risk levels. Subsequently, these participants were asked to estimate the probability as per which they would suspect the presence of irregularities and sceptical behaviour. These independent variables included the existence of related party transactions, auditor-client friendship, EA tenure, clients as source of referrals, last accuracy, client incentives to misstate, significance of clients, quality of communication as well as gender of clients. According to their findings, the five factors that significantly influenced EA's professional scepticism included the following: existence of related party transactions, client motive to misstate due to financial stress, clients' past accuracies and poor quality of EA-client communication.

Since poor quality of communication is known to reduce trust, it is reasonable to expect that communication barriers may reduce the levels of prevailing trust. Golan (1997) narrowed down the factors affecting client and auditor relationships on communication barriers. The purpose of this study was to evaluate client perceptions of the seriousness and frequency of potential communication barriers in external audits. This study is relevant because these results may show the most serious factors reducing the quality of communication, which may be a significant factor that influences their trust in ACMs.

In the study, 264 questionnaires were sent, of which 163 questionnaires were collected, yielding a response rate of 62 percent. Notably, 29 items pertaining to communication barriers were included in the questionnaires. Four latent variables were created, including credibility and background, hostility and conflict, physical environment and competitiveness. The latent variables of credibility and background, along with hostility and conflict, were found to be the most serious barriers to healthy communication. The ten most serious factors affecting communication between EAs and clients included the following: distortion or omission of information, lack of credibility, hostile attitude, inadequate common accounting knowledge, tendency not to listen, inability to provide feedback, lack of understanding of technical accounting terms, personality conflicts, and "either-or" thinking.

In the disagreement between clients' managers and EAs, the former's degree of openness of communication and concerns are expected to positively relate to their trust in managers because if clients' managers who are neither able to communicate openly nor demonstrate concern cannot generate an improved feeling of trust by EAs, the situation can worsen to a level that even leads to distrust (Rennie Kopp and Lemon, 2010). Secondly, the duration of the relationship between EAs and clients is expected to have a positive correlation with trust because longer relationships are likely to enhance relationship quality. The frequency of disagreements is expected to negatively relate to trust because if disagreements happen more frequently, EAs can cast doubts on client's managers who may neither follow GAAP nor influence audit process (Rennie, Kopp and Lemon, 2010).

Rennie, Kopp and Lemon (2010) made use of questionnaires to examine the level of trust between EAs and clients' managers in the context of conflicts. Their objective was to use the context of disagreements to explore client behaviours and aspects of EA-client relationship that may potentially influence the level of trust between them. This study is relevant because the results may provide actionable insights into the factors that may influence EAs' trust in ACMs during disagreements. Notably, these agreements may exist because they may have different opinions on the scope of the audit, audit planning and the judgment of accounting estimates. The authors invited 120 EAs to participate in their study that was conducted in Canada. They saw the participation of 71 EAs, yielding a response rate of 71 percent. The dependent variable was the assessment of overall trust. The independent variables were the assessment of the managers' openness of communication and demonstration of concern during the disagreements, frequency of disagreements with the clients and length of association in years. They found that the openness of communication and concern during a disagreement were positively associated with the trust. The duration of association positively related to the trust, but the frequency of disagreement negatively related to the trust after controlling for the effect of the EA's satisfaction with the outcome of the disagreement and EA's predilection to trust.

To conclude, the above factors influencing EAs' trust in clients' managers can be recognised as their perception of clients' managers' competence, integrity and goodwill. For instance, the lack of understanding of technical accounting terms can be regarded as incompetence, omission of information can be considered to be low integrity and lack of credibility and low level of independence can be deemed as low goodwill. Therefore, the researcher expects their perceptions of ACMs' competence, integrity and goodwill to possibly influence their trust in ACMs.

Table 35 summarises the findings of prior studies about antecedents of trust in auditing.

Table 35:	Antecedents	of Trust	in Auditing

Authors	Antecedents of Trust	Results
Shaub (1996)	Competence (past inaccuracies)	EA tenure, past inaccuracies
		and quality of EA-client
	Goodwill (auditor tenure and	communication significantly
	quality of communication)	influenced EAs' trust in cli-
		ents' management.
Shaub and Lawrence	Competence (clients' past accu-	Five factors that significant-
(1996)	racies)	ly influenced EA's profes-
		sional scepticism: existence
	Integrity (client motive to mis-	of related party transactions,
	state financial statements)	client motive to misstate due
		to financial stress, clients'
	Goodwill (poor quality of	past accuracies and poor
	communication	quality of EA-client com-
		munication.
Golen (1997)	Integrity (distortion or omission	The ten most serious factors
	of information)	influencing communication

		between EAs and clients in-
	Goodwill (tendency not to lis-	cluded: distortion or omis-
	ten; lack of credibility; person-	sion of information, lack of
	ality conflicts; either-or-	credibility, hostile attitude,
	thinking)	inadequate common ac-
		counting knowledge, ten-
	Competence (inadequate com-	dency not to listen, inability
	mon accounting knowledge;	to provide feedback, lack of
	failure to give feedback; lack of	understanding of technical
	understanding of technical	accounting terms, personali-
	terms)	ty conflicts, and "either-or"
		thinking.
Rennie, Kopp and Lemon	Goodwill (concern during a dis-	The openness of communi-
		_
(2010)	agreement)	cation and concern during a
		disagreement were positive-
	Integrity (openness of	ly associated with trust. The
	communication)	length of association posi-
		tively related to the trust, but
		the frequency of disagree-

	ment negatively related to
	trust

## 7.4 Antecedents of Trust: Goodwill, Competence and Integrity Trust in Other Fields

Section 7.4 provides a generic view about how EAs' trust in ACMs may be established. This section narrows down the antecedents of trust on goodwill, competence and integrity. Plenty of studies in psychology, marketing and alliances support the view that goodwill, competence and integrity significantly influence the level of trust between partners when it comes to business relationships. Against this backdrop, the current section begins by introducing three types of trust: goodwill trust, competence trust and integrity trust. It is then followed by a review of previous studies.

The first type of trust is goodwill trust, which is established if a partner commits to respond beyond the levels required by the prevailing norm or can be recognised as actions which prioritises another party's benefits over one's own (Cherry, 2016; Liu, Ke, Wei, 2015; Laaksonen, Pajunen and Kulmala, 2008; Sako, 1992) Goodwill trust concerns one's intention to perform according to agreements (Cherry, 2016; Liu, Ke and Wei, 2015 Nooteboon, 1996). In this study, EAs' trust in ACMs' goodwill has been defined as their trust in ACMs' commitment to be responsive to EAs' request beyond the standard requirements of audit standards and ACMs' discretionary actions to adjust their efforts in facilitating EAs' work in an external audit.

However, goodwill trust only provides some assurance that partners may behave in a consistent way due to past behaviour and prioritises the other party's benefits, but remains salient about the confidence in improving performance unless partners are trusted about competence (Dirks and Skarlicki, 2008). In the realm of auditing, EAs and ACMs are required to communicate with one another in terms of technical knowledge of accounting and auditing. Since they cannot communicate effectively without competence, competence trust cannot be established. Competence trust concerns one's ability to perform in accordance with agreements (Connelly et al., 2018; Cherry, 2016; Liu, Ke and Wei, 2015; Laaksonen, Pajunen and Kulmala, 2008; Nooteboom, 1996). Blomqvist (1997) suggested that competence is reflected in one's professionalism, capability, realistic judgment, experience and interpersonal skills. In this study, EAs' trust in ACMs' competence is defined as their level of trust in ACMs' financial expertise, professionalism and experience of forming appropriate judgments and overseeing the internal controls, financial statements and audit processes.

Perceiving partners as trustworthy due to their competence might only show that partners have valuable resources for exchange; however, this perception remains salient about whether partners may reciprocate or even behave in an opportunistic manner during the course of an exchange (Connelly et al., 2018; Dirks and Skarlicki, 2008). Bews and Rosssouw (2002, p.382) defined integrity as "the application of a set of moral and ethical rules acceptable to both trustor and trus-

tee, which are predictable and reliable and which lead to equity". Integrity leads to integrity trust because if integrity exists, partners may expect to receive fair treatment from one another (Connelly et al., 2018; Dirks and Skarlicki, 2008). If one party is perceived to have integrity, another party may expect that he or she may not be taken advantage of in a relationship and may tend to respond in kind (Connelly et al., 2018; Dirks and Skarlicki, 2008). In this study, EAs' trust in ACMs' integrity has been defined as their trust in ACMs' application of a set of moral and ethical rules acceptable to EAs, so that ACMs' behaviour becomes predictable and reliable.

Prior studies in other fields provided evidence that EAs may trust ACMs if they display goodwill, integrity and competence. For instance, Lapidot, Kark and Shamir (2007) conducted a study to examine the relative importance of factors that build and erode trust. The authors used the critical incidents method in their study which elicited the participation of 736 respondents. The authors found that integrity, benevolence and ability were positively and negatively associated with trust building and trust erosion, respectively. Followers were more likely to recall more leaders' behaviour that showed leaders' benevolence in trust building; however, followers were more likely to recall more leaders' behaviour that demonstrated integrity and ability in the case of trust erosion. The relevance of these findings is that it is very difficult to build trust but very easy to destroy it. Therefore, EAs' trust in ACMs should be built before its erosion. Secondly, their perception of ACMs' integrity, benevolence and competence encourage them to trust ACMs. These factors may significantly erode their trust in ACMs if their perceptions of ACMs' integrity and benevolence are low.

Actors place their trust not only in leaders, but also in subordinates and peers. Knoll and Gill (2011) investigated antecedents of trust in supervisors, subordinates and peers in a study whose objective was to explore the development of trust in upward, downward and lateral relationships in workplace. They also investigated whether the relative importance of integrity, benevolence and integrity is different in the establishment of trust in supervisors, subordinates and peers. According to their findings, employees become vulnerable when they trust their supervisor because supervisors have influence over resource allocation and make decisions that may have significant impacts on them. Therefore, the authors suggested that employees care more about their supervisors' benevolence and integrity. Further, since supervisors rely on the quality of work performed by their subordinates to fulfil their duties, subordinates' ability is a more important factor that influences supervisors to place trust in subordinates. For this reason, the authors suggested that subordinates' ability is a more important factor that influences supervisors' trust in employees.

The authors recruited participants from members of a human resources department in a large Canadian corporation; 81 members participated in the study, yielding a response rate of 51 percent. An invitation to participate in this survey was posted on the association's website for four weeks. This survey witnessed the participation of 109 members. They found that ability, benevolence and integrity were all important factors which influenced the level of trust in supervisors, peers and subordinates. These results also confirmed their expectation that supervisors' benevolence and integrity were more important factors that encourage employees to trust their supervisors and demonstrated that subordinates' ability was a more important factor that influenced supervisors to trust their subordinates. This finding implies that if ACMs display high levels of integrity, benevolence and ability, EAs may be inclined to trust ACMs. Since ACMs control the resources allocated to them and make decisions that may have significant impacts on their work, integrity and benevolence are expected to be important factors that encourage them to trust ACMs.

These studies above did not examine whether trust and distrust may coexist. Distrust is different from the erosion of trust or low levels of trust. Erosion of trust only indicates a negative change in trust, whereas lack of trust only indicates low levels of trust, but distrust has been defined as "lack of confidence in the other, a concern that the other may act so as to harm one, that he does not care about one's welfare or intends to act harmfully, or is hostile". (Govier, 1994, p.240) For this reason, distrust signifies an extreme low level of trust. In a study that aimed to provide new perspectives of managing relationships effectively by exploring the dimensions of trust and suggesting distrust as an additional dimension, Welch (2006) examined the relationships between antecedents of trust and the levels of trust as well as distrust using semi-structured interviews in the UK.

It was argued that trust and distrust can coexist between different firms. For example, a firm may trust the fact that its partner has ability to perform, but does not actually trust that the partner will perform. Welch (2006) conducted seven interviews with three corporate communication teams and four interviews with their service providers. It was found that trust and distrust may coexist

between firms; also integrity, dependability and competence were identified as important sources of trust. Guile, self-interest, lack of care, disrespect, suspicion, intuitive scientist, lack of confidence and concern about harm were all important sources of distrust. Thus, it is important to understand the factors that influence EAs' trust in ACMs because while they may trust ACMs' integrity and goodwill, they may not trust ACMs' accounting knowledge to conduct their work smoothly.

How trust is formed can be examined at the growth stage of a business-to-business relationship because growth stage requires the highest level of interactions. Dowell (2013) conducted interviews to investigate how competence, integrity and goodwill trust were established in a buyer and seller relationship at the growth stage. The purpose of this study was to improve the understanding of the development of drivers of trust during the growth phase of the relationship lifecycle. In this study, 18 interviews were conducted with the managers from liquor industry in Australia. This industry was chosen because it was highly competitive. They found that competence trust was formed by performance, expertise and high quality of communication. Integrity trust was collectively formed by honesty, integral actions and candid responses. Goodwill trust was formed by discretionary activities undertaken by partners and positive attitude towards partners. These findings imply that EAs' perception of ACMs' competence, integrity and goodwill may encourage them to trust ACMs in external audits.

Table 36 highlights prior studies about antecedents of trust in other fields in the literature.

Authors	Antecedents of Trust	Results
Lapidot, Kark and Shamir	Integrity, benevolence	Followers were more likely to
(2007)	and ability	recall the incidents that eroded
		trust than the incidents that built
	Leaders' benevolence:	trust.
	increase in trust.	
		Integrity, benevolence and abil-
	Leaders' integrity: de-	ity positively related to trust
	crease in trust	building and trust erosion.
		Followers were more likely to
		recall more leaders' behaviour
		that showed leaders' benevo-
		lence in the case of trust build-
		ing.
		Followers were more likely to

**Table 36:** Antecedents of Trust in Other Fields

		recall more leaders' behaviour
		that showed integrity and ability
		in the case of trust erosion.
Knoll and Gill (2011)	Ability, benevolence and	Ability, benevolence and integ-
	integrity.	rity were all important factors
		that influenced trust in supervi-
	Increase in trust in super-	sors, peers and subordinates.
	visors: benevolence and	
	integrity.	Supervisors' benevolence and
		integrity were more important
	Increase in trust in subor-	factors that influenced employ-
	dinates: ability.	ees to trust supervisors and
		Subordinates' ability was the
		more important factor that in-
		fluenced supervisors to trust
		their subordinates.
Welch (2006)	Increase in trust: integri-	Integrity, dependability and
	ty, dependability and	competence were important

competence.	SUTING SULTION.
	sources of trust.
Increase in distrust:	Guile, self-interest, lack of car-
goodwill (lack of caring,	ing, disrespect, suspicion, intui-
disrespect, suspicion, in-	tive scientist, lack of confidence
tuitive scientist and con-	and concern about harm were
cern about harm).	all important sources of distrust.
Integrity: (self-interest	
and guile)	
Ability: (lack of confi- dence)	
Competence (expertise	Competence trust was formed
competence (expertise	Competence trust was formed
and quality of communi-	by performance, expertise and
cation)	high quality of communication.
Integrity (honesty and	Integrity trust was formed by
intention)	honesty, integral actions and
	candid responses.
E C T C T I A C C I I A C C I I A C C I I A C C I I A C C I I A C C I I A C C I I A C C I I A C C I A	goodwill (lack of caring, lisrespect, suspicion, in- uitive scientist and con- eern about harm). Integrity: (self-interest and guile) Ability: (lack of confi- lence) Competence (expertise and quality of communi- eation) Integrity (honesty and

will (discretionary	
ties and positive at-	Goodwill trust was formed by
e)	discretionary activities under-
	taken by partners and positive
	attitude towards partners.
	aties and positive at-

Prior studies provide evidence that actors may trust one another if they display competence, integrity and goodwill. The researcher expects the same relationships to be applicable on the relationships between EAs and ACMs. Accordingly, the following propositions are formed in order to answer Research Question 2:

P1: EAs trust ACMs if they have and display competence.

P2: EAs trust ACMs if they have and display integrity.

P3: EAs trust ACMs if they have and display goodwill.

## 7.5 Trust, Interactions and Performance

Many prior studies have been conducted to examine how trust between actors facilitates their interactions, leading to improve their performance. With high levels of trust, actors are likely to establish mutual and collective expectations, so trust encourages actors to interact. They are more likely to coordinate and to communicate effectively (Costa and Anderson, 2011), thus en-

hancing performance. They become willing to accept opposing opinions (Pinjani and Palvia, 2013) and encourage another to participate in collaborative relationships around difficulties and issues. However, a lack of trust may result in defensive behaviours and reduce the cooperative behaviour and flow of information (Colquitt et al., 2007).

Although there is no existing literature arguing that EAs' trust in ACMs improves their interactions with ACMs which may have positive impacts on audit quality, studies relating to other fields suggest that trust enhances interactions between partners in different firms, leading to improved performance. The researcher expects that similar relationships may be applied to the relationships between the EAs and ACMs. For instance, their trust may encourage them to share more information and coordinate diligently. They may become willing to share their opinions on managers' performance and their experience on improving internal control systems with ACMs. They need to engage in effective communication in order to determine the scope of the audit and perform risk assessment. Their trust encourages them to contribute more resources in terms of manpower and expertise during the course of the audit process. Additionally, they need to have high levels of cooperation and commitment. For example, they are required to hold meetings in order to discuss audit plan, audit process and audit progress. If they are able to identify internal control weaknesses, they need to report the same to ACMs. They also need to cooperate so that ACMs may support EAs' positions and devote significant amount of manpower and expertise in external audits beyond the requirement of the audit standard. Without trust, EAs may only be able to meet the minimum requirements as suggested by the audit standard without devoting additional resources to audit processes. The researcher expects these effective interactions between EAs and ACMs to enhance their performance, resulting in improved effectiveness and efficiency of audit processes.

Sections 7.3 and 7.4 provide evidence that one may trust another because of the perception that another displays competence, integrity and goodwill. However, the understanding of the antecedents of trust *per se* does not help the researcher investigate whether EAs' trust improves interactions with ACMs, which, in turn, may improve audit quality. Hence, Section 7.6 reviews previous studies about the effects of trust on interactions and actors' performance. At the end of this section, the relevance of findings is drawn to the linkage between EAs and ACMs.

## 7.5.1 Prior Interview Studies about Trust, Interactions and Performance

Qualitative studies can be used to explore the effects of trust on interactions and performance. It may be possible that EAs' trust in ACMs helps improve their interactions and in effect, their performance, thus leading to high audit quality. Therefore, it is important to explore the relationship between heightened level of trust and performance.

Hadjielias and Poutziouris (2015) investigated the conditions that improve the cooperative relationship between family businesses. Trust is considered to be useful when the cooperation between family firms is governed by their mutual expectations and obligations as opposed to legal contracts and formal controls (Coletti, Sedatole and Toery, 2005; Kroeger, 2011). In this sense, trust is seen as an important mechanism of informal cooperation, which effectively substitutes the need for the formal control of actions and interactions taking place between transacting organisations.

Hadjielias and Poutziouris (2015) used a firm, Zenon, as the case study. It is a legal entity that is owned and controlled by family-owned and controlled businesses. Zenon was organised for the purpose of providing services to its member firms. Thus, inter-firm cooperation would assume the form of interpersonal relations and interactions between family members from various family businesses. They had conducted the study for a period of 18 months. Data were collected from as many as 16 interviewees within the cooperative association under concern.

The findings suggested the presence of cooperation between family businesses, which indicated that it was important to establish trust and maintain cooperative ties between family businesses. Trust between family leaders was important in building altruism and collective thinking with a view to maintain the cooperation between their respective firms. Self-interest weakened the positive relationship between trust and cooperative relationships, although critical incidence that required intensive interactions strengthened the positive relationship between trust and cooperative relationships. However, their study was conducted in a particular cooperative association of family businesses and their findings may not be generalised to other types of businesses.

The effects of trust can be investigated in the context of public sector partnerships because these

partnerships involve a high level of interdependence and cooperation in order to achieve common goals. Bogt and Tillema (2016) explored the role of trust and accounting information in the context of public sector partnerships. It may be noted that the theatres rely on municipalities for the purpose of financial support. Municipalities meanwhile depend on the skills of the theatre professionals for their performance. It is for this reason that they are highly interdependent on one another. The authors suggested that trust improves openness and information sharing.

They asked one research question relevant to the study: what are the roles of trust at the operational level of organizations involved in a public sector partnership? To this end, they conducted studies from 2010 to 2013; 24 semi-structured interviews were conducted involving 21 persons in the five theatres along with their municipalities. They observed that annual formal agreements were not very elaborative because the actual performance of theatre was difficult to quantify. Therefore, it was not possible to strictly control the theatre's activities. The municipality depended on the competence of professionals in the theatre, which could only be assessed via qualitative information and informal contacts. Their research showed that the municipality had a great deal of trust in the competence of the theatre. Even as the low measurability of the theatre's outputs and outcomes complicates the process of control utilised by municipality, trust may serve a form of control.

As per their observations, participants from the theatres showed that trust in government officials' goodwill and competences did encourage open discussions. These findings are relevant because the quality of external audits is difficult to qualify and ACMs cannot elaborate on the terms and conditions of a contract with EAs. ACMs largely depend on their competence and experience to perform a high quality audit as well as their goodwill to provide recommendations beyond statutory requirements.

The effects of trust can be investigated in a scenario involving the change of trust from low to high levels. Minnar et al. (2017) explored how contracts, control structures and trust interactively shape and change an interfirm relationship. They pointed out that contracts and trust can serve as control mechanisms because contracts may reduce risk and facilitate cooperation in a partnership. These two mechanisms interact with one another to determine the level of cooperation. Performance is expected to be better as the level of cooperation is improved.

Minnar et al. (2017) conducted the study by means of field research and semi-structured interview in 2008. Lecorg was the parent company of Semorg. The top management of Lecorg and Fasorg signed the contract. Semorg's managers demonstrated a low level of trust and cooperation in Fasorg because Semorg's managers did not support the outsourcing decisions made by Lecorg. The contract caused conflicts in regard to assignment of responsibilities, accountability and incentivising issues. Semorg's managers become non-cooperative due to the conflicts of the contract. Therefore, the contract was renegotiated in 2007. Since ideas were shared between the two parties' managers and terms were fairly determined to establish trust. The managers exchanged their ideas and business plans. They became open to discussing the issues of savings in projects. They changed the practice of having one hour meetings once a week to having a full afternoon once a month and expressed that a full afternoon meeting was more useful because that allowed them to discuss the issues in greater detail. This study has implications that if EAs trust ACMs, they may spend more time discussing audit issues with ACMs. They may be willing to share their audit plans or other information with ACMs, so that the effectiveness and efficiency of audit processes may be improved.

Similarly, Edelenbos and Eshuis (2012) conducted two case studies of two projects in Netherlands to investigate the effects of change of trust on performance. They were interested in examining the interplay between trust and control in decision-making processes in the setting of public management. The two cases used included urban renewal in the Dutch city of Breda and nature conservation in the province of Friesland. Data were collected through a combination of interviews, observations and document analyses; 13 and 15 semi-structured interviews were conducted for Breda and Friesland, respectively.

The project of Breda was focused on improving the livability of citizens' surroundings. The inhabitants had low levels of trust in the capacity of municipality, which wanted to improve the level of trust from the inhabitants by ceding some controls to the inhabitants to participate in the project. The municipality had the responsibility of the allocated budget, but the citizens were free to use the budget. The citizens were in charge of the project and able to influence its implementation. The inhabitants started to trust the fact that the municipality was serious about improving the neighbourhood. The inhabitants submitted 220 ideas for implementation; interaction and communication between the civil servants and the citizens eventually flourished. However, the project did not go well. The implementation failed and the spending eventually ran out of budget. Therefore, municipality started to take away the control from the citizens. As a result, the citizens distrusted the municipality again. Subsequently, there was a decline in the number of plans and ideas that were submitted.

In the case of Friesland, the farmers felt that the municipality prioritised the conservation of the landscape over agricultural production. As a result, the farmers began to distrust the intentions of the municipality. Implementation of the plan turned out to be problematic because many farmers did not cooperate. The municipality realised that the policy process would not be successful without the farmers' cooperation, and the farmers understood that not complying with the law would cause a lot of trouble.

Farmers in a neighbouring municipality initiated an environmental cooperative and started a subsidised landscape management project. They started to trust one another because they had a common interest: landscape management, so mutual understanding developed. A formal monitoring system with specified output-control parameters was developed. An independent inspection committee was also established. The monitoring team was accepted and trusted by all the parties based on their independence and expertise. The moderate level of trust that developed after agreeing to have a common interest (landscape management) made it possible to have a collaborative way of creating and implementing a monitoring system.

The results of two cases showed that trust improved cooperation. In the first case, the result showed that once trust did not exist, the ideas submitted for implementation were significantly reduced. In the second case, when trust did not exist, it was found that the actors may not cooperate. This study is relevant because EAs' trust may encourage them to cooperate with ACMs. For example, they may be willing to spend more time discussing with ACMs for effective and feasible recommendations.

Another study demonstrates that trust is important for moderating the effects of controls on performance. Although the controls are tight, partners may not cooperate, if trust does not exist, so performance is reduced. Hence, trust may have a moderating effect on the relationship between control and performance. Yan and Gray (1994) explored the effects of balance of bargaining power on balance of management control in the joint ventures between US and Chinese firms. Yan and Gray (1994) conducted the study using in-depth interviews and archival data of the firms. The interviews were conducted with the executives and managers of the US and Chinese firms. These executives and managers were involved in joint ventures. Four firms involving US and Chinese joint ventures were selected. These selected joint ventures were manufacturing joint ventures because manufacturing joint ventures accounted for the largest portion of joint ventures between US and Chinese firms.

The interviews were conducted from May 1991 to January 1992. Nine factors were identified that influenced the bargaining power, such as alternatives available, expertise and local knowledge and four management controls used in joint ventures. According to their findings, unbalanced bargaining power led to unbalanced management control in all cases. For example, if US firms have more bargaining power due to more alternative sources, the US firms may use more management controls on Chinese firms. However, the effects of balanced management controls on performance were inconsistent.

Therefore, the authors investigated the inconsistence by conducting interviews. They found that mutual trust was an important factor that moderated the effects of management control on performance. When management control was dominant in one partner, trust was important to enhance their cooperation. In the absence of trust, another partner with lesser control may perceive that they may be taken advantage of, so they may not want to cooperate. The findings may be applied to the relationships between EAs and ACMs. In addition to the duties mandated by the contract between EAs and ACMs, they are also required to interact and cooperate in external audits for high quality audit. Therefore, trust plays a significant role in moderating their cooperation efforts. Actors in education industry also require trust for cooperation in order to succeed. Oortmerssen, Woerkum and Aarts (2014) explored the relationship between trust and interactions over time in a collaborative project in the education industry. They posited that trust promotes exchange of knowledge and information, so that performance is improved. They conducted these studies using interviews with board members in professional education industry. They also observed and audio recorded the board meetings over a year, finding that board members of the schools worked on a project that set up a centre. Semi-structured interviews were conducted with nine board members across two varying periods of time.

In the first interview, the board members were asked about the evolution of their collaboration, interactions about other board members, expectations about the collaboration and other board members. In the second interview, the board members were requested to reflect upon collaborative developments over the past and explain the impact of trust in interaction patterns. Observation memos of board meetings were used as a secondary data source so as to understand the atmosphere during the meetings.

They found that trust improved the level of openness for discussions and responsiveness to questions and increased the pace of conversation between board members. This implies that discussions and interactions are intensified. They also noted that perceptions of competence and goodmay increase the level of trust. This study may imply that EAs' trust encourages them to exchange information and cooperate. Further, their trust encourages them to openly discuss issues with ACMs and respond speedily to ACMs' questions.

Fadol and Sandhu (2013) explored the role of trust in long-term commitment between partners in strategic alliance with firms coming from different cultures. Fadol and Sandhu (2013) concurred that trust allows a free exchange of useful information. For this purpose, they selected a case with foreign partners from countries with different cultural backgrounds. A joint venture formed by Abu Dhabi National Oil Company, British Petroleum (BP)-UK, Tokyo Electric Power Company (TEPCO)-Japan and Total-France was utilised in this city that produced and sold Liquefied Natural Gas and Liquefied Petroleum Gas. The major goals of these joint ventures were to reduce gas which polluted the environment and to exploit these resources as a source of income for the country. Nineteen interviews were conducted from February to March 2010. Those that were interviewed included managing directors and chief executive managers. Thematic analysis was used to code the data to generate theoretical concepts.

They observed that trust enabled partners to exchange resources faster, devote more funds to the venture and exchange knowledge and information smoothly. They observed that building trust between partners helped avoid bureaucratic obstructions and enhanced the decision making process. Moreover, trust and cooperation enabled the partners to swiftly contribute more resources to implement their joint project. As a result, decision-making processes were expedited. The rel-

evance of these findings is that high levels of EAs' trust in ACMs may encourage them to exchange resources in terms of manpower and expertise and may accelerate their decision making.

Table 37 summarises prior interview studies about trust, interactions and performance in the literature.

**Table 37:** Trust, Interactions and Performance: prior interview studies about trust, interactions

 and performance

Authors	Dimensions	Results
Hadjielias and Poutziouris	Trust, altruism and self-	Trust was important to enhance
(2015)	interest	cooperation between family
		firms. Trust may strengthen al-
		truism, which, in effect, en-
		hances cooperation.
		Self-interest may weaken the
		positive relationships between
		trust and cooperation.
Bogt and Tillema (2016)	Difficulties to specify	Annual formal agreements were
	outcome, control mech-	not very elaborative because the

anisms and information	real performance of theatre is
sharing.	difficult to quantify.
	Strict controls of the theatre's
	activities were not considered
	possible. The municipality de-
	pended on the competence of
	professionals in the theatre.
	Competence of professionals
	could not be expressed by quan-
	titative indicators but via quali-
	tative information and informal
	contacts.
	The municipality had a great
	deal of trust in the competence
	of the theatre, both at opera-
	tional and the higher level. As
	the low measurability of the

		theatre's outputs and outcomes complicates the control used by municipality, trust may serve as a form of control. Participants from the theatres showed that trust in government officials' goodwill and compe- tences encourages open discus- sions.
Minnar et al. (2017)	Cooperation, effort to exchange ideas, helping one another, open dis-	As Fasorg's and Semorg's man- agers and terms were fairly de- termined between these two
	cussions and intense in-	companies, trust was estab-
	teractions.	lished. Semorg's and Fasorg's
		managers became more cooper-
		ative.
		Therefore, their behaviour was

		more cooperative and perfor-
		mance of contract was more
		effective after trust was estab-
		lished.
Edelenbos and Eshuis (2012)	Efforts to provide ideas,	In the project of Breda, trust
	collaboration for imple-	was encouraged. The inhabit-
	mentation	ants submitted 220 ideas for
		implementation. In the case of
		Friesland.
		The moderate level of trust that
		developed after agreeing to
		have the same interest (land-
		scape management) made it
		possible to have a collaborative
		way of creating and implement-
		ing a monitoring system.
Yan and Gray (1994)	Moderating effects of	When management control was
	power on cooperation.	dominant in one partner, trust

		was important to enhance their
		cooperation.
		In the absence of trust, another
		partner with lesser control may
		perceive that they may be taken
		advantage of, so they may not
		want to cooperate, leading to
		worse performance.
Oortmerssen, Woerkum and	Intense interactions,	Trust boosted interactions and
Aarts (2014)	open discussions and	vice versa. They found that trust
	responsiveness	enhanced openness for discus-
		sions and responsiveness to
		questions.
		Trust increased the pace of con-
		versation between board mem-
		bers. It implies that discussions
		and interactions are intensified.

		They also noted that percep-
		tions of competence and good-
		will increases the level of trust.
Fadol and Sandhu (2013)	Faster speed of exchang-	Trust helped partners exchange
	ing resource, knowledge	resources faster, devote more
	and information	funds to the venture and ex-
		change knowledge and infor-
	Better cooperation,	mation smoothly.
	commitment, reliability	
	and fairness	Trust resulted in high levels of
		cooperation, commitment, reli-
	Lower opportunistic be-	ability and fairness and no op-
	haviour	portunistic behaviour.
	Combining partners' ca-	Trust also helped combine the
	pabilities	partners' capabilities so that the
		strategic alliance and competi-
	Improvement of compet-	tive advantage of all partners
	itive advantage	could be improved further than

	any partner could have achieved
Commitment of re-	alone.
sources	
	Trust and cooperation helped
Fast speed of decision-	the partners quickly commit
making	more resources as and when
	needed as well as to implement
	their joint project, a decision
	which speeded up the decision-
	making.

## 7.5.2 Prior Questionnaire Survey Studies about Trust, Interactions and Performance

The above mentioned qualitative studies provide evidence that if the level of trust between actors is found to be high, their performance may be enhanced because of improved interactions. Past quantitative studies of trust in international joint ventures and alliances, research and development and supply chain management reinforced these results by consistently demonstrating evidence that trust enhances interactions and performance.

Trust is important to the success of international joint ventures and alliances by strengthening informal control mechanisms so that partners will not behave opportunistically (Ng, Lau and

Nyaw, 2007). Trust also promotes cooperation (Hadjielias et al., 2015), facilitates interactions (Jiang, Henneberg and Naude, 2011) and enhances satisfaction (Silva, Bradley and Sousa, 2012), which allows partners to have better interactions with one another. In addition, trust encourages resources mobilisation, which encourages partners to contribute their resources toward a common goal (Robson, Katsikeas and Bello, 2008). These elements are also critical in the context of external audits.

Silva, Bradley and Sousa (2012) suggested that the similarities between partners improve the exchange relationships that enhance satisfaction, thus strengthening the relationship between trust and performance. They investigated the antecedents of trust and performance in international alliance, claiming that trust improves performance by enhancing the level of their satisfaction. This is reflected in the perception of performance. The study was conducted in Portugal when questionnaires were mailed to 3,705 firms with international business activities; 232 responses were received, yielding a response rate of 6.3 percent. Performance was measured in terms of profitability and satisfaction. They noted that the positive relationship between trust and performance was moderated by partner similarity. The results may imply thatEAs' trust in ACMs improves their performance in external audits. In particular, these findings may provide insight into whether the similarity between EAs and ACMs may strengthen the positive relationship between trust and their performance.

Alliance size is also expected to moderate the relationships between trust and performance be-

cause a high level of trust is needed to coordinate activities in a large firm (Robson, Katsikeas and Bello, 2008). Park and Ungson (1997) argued that if the size of an alliance increases, greater bureaucratic structuring may weaken the network connections among different partners. Robson, Katsikeas and Bello (2008) examined the effects of trust on alliance performance in international strategic alliances and concurred that trust improves performance by encouraging partners to transfer their resources. To this end, McEvily, Perrone and Zaheer (2003, p.97) said: "mobilising involves motivating actors to contribute their resources to combine, coordinate and use them in joint activities, and to direct them toward the achievement of organizational goals". They collected the data from 342 firms in the US, Western European and Far Eastern with partners from the UK. Questionnaires were mailed to the directors or project managers of these firms and 177 responses were collected, yielding a response rate of 52 percent. Alliance performance was measured in terms of effectiveness, efficiency and responsiveness.

They observed that the positive effects of trust on alliance performance were higher in a small alliance. This study is relevant because the findings imply that if EAs trust ACMs, they may be more willing to contribute their resources towards the cause of an external audit. If so, they may become more diligent in evaluating internal control systems and accounting procedures. ACMs may also be more willing to discuss significant risk area of operations with them, so that they can focus on auditing high risk areas. Hence, audit quality may be enhanced. Secondly, this study may imply that if client firms are large, they may be more bureaucratic, thus weakening the positive relationships between EAs' trust and their interactions with ACMs, so that a higher level of

trust may be required for EAs to perform a large scale of audit in large companies.

In the context of research and development, trust is essential for enhancing performance because partners are required to share their knowledge and skills if they want to succeed. Research and development organisations need to share knowledge for creation from different fields (Bien, Ben and Wang, 2014; Cheng, Chen and Shih, 2014; Berends et al., 2006). Trust is also required in order to reduce members' anxiety about sharing their knowledge and ideas to create mutual understandings of problems as well as to coordinate activities (Bien, Ben and Wang, 2014; Nielsen and Nielsen, 2009; Panayides and Venus, 2009).

Arranz and Arroyabe (2011) argued that partners may formulate their reciprocal expectations by building trust which helps them obtain information and make partners open to one another. This cooperative atmosphere may help establish the requisite confidence. Arranz and Arroyabe (2011) investigated the effect of governance mechanisms in formal contracts and trust on the performance of research and development. In this study, they mailed questionnaires to the CEOs of biotechnology companies. The sample was selected by stratified sampling, proportional to groups of type of project (exploration and exploitation) and European country; 371 usable questionnaires were received under this project. Performance was measured as satisfaction with attainments of goals, financial performance and overall performance. The results were controlled for the effects of asset specificity, technological uncertainty as well as measurement difficulty.

The result confirmed that the use of contract and trust positively related to performance. As a result, it was concluded that contractual mechanisms were more effective in improving the performance of exploitation projects than trust, but trust was more effective in improving the performance of exploration projects than contractual mechanisms. The results imply that trust plays a critical role in creating confidence through cooperation. EAs and ACMs may become more open towards exchanging information. Further, trust may reduce opportunism and increase cooperation in an unpredictable environment, particularly after the introduction of new auditing or accounting standards, thereby leading to improved audit quality.

Trust also plays a critical role in supply chain management. Partners need to respond to demands for greater flexibility and have a high level of cooperation in supply chain relationships (Halil et al., 2016; Wang, Ye and Tan, 2014; Chan and Chan, 2009; Hult, Ketchen, Arrfelt, 2007). Trust enables partners to share information about orders, operations, strategy and competition with their suppliers (Uca et al., 2017; Halil et al., 2016; Chen, et al., 2013; Salzarulo and Jacobs 2014; Chan and Chan, 2009), so that trust enhances commitment and collaboration in strategic supply chain alliances (Uca et al., 2017; Yeung et al., 2009).

Bryan, Sinkovics and Kim (2010) suggested that trust and technology uncertainty influences the levels of learning, in effect affecting market performance. According to them, trust reduces the anxiety of keeping confidential information, so learning will be improved. Technological uncertainty refers to the unpredictability concerning the usage of technology. Since uncertainty is high,

firms may be willing to share more important information to overcome the adaption problems, thus improving learning. As a result, buyers and sellers may have mutual understanding accordingly, so that they can engage in mutual learning in a relationship, thereby enhancing market performance.

They conducted the questionnaire survey using the relationships between Taiwanese suppliers and their international buyers; 246 account and marketing managers responded in the study, yielding a response rate of 23.29 percent. After controlling for the effects of firm size, they found that trust and technology uncertainty positively related to learning, leading to improve market performance. These results imply that if EAs' trust in ACMs is established, learning may occur, resulting in improved performance in external audits. This may be particularly important if the clients have high levels of unpredictability relating to the use of technology. For instance, a client may simply adopt new accounting information systems. However, this study ignored the effects of coercive power on the levels of trust, which can possibly lead to threats and penalties, thus lowering the level of trust.

The effects of trust on supplier performance may be mediated by conflicts and negotiation cost. For instance, Fiala, Rrokop and Zivelova (2012) investigated the relationships between interorganisational trust and performance in the Czech Republic. They posited that trust reduces the negotiating cost because time and money will not be wasted in bargaining and monitoring one another. Consequently, performance is improved. Questionnaires were sent to organisations with over 20 employees. As part of this study, 515 questionnaires were sent and 395 usable questionnaires were received. Performance was measured in terms of the customers' perception of timeliness of delivery, high quality supply and price competitiveness. They found that trust helped reduce conflicts and negotiation cost. As a result, supplier performance was increased by reducing conflicts and negotiation costs. These results may indicate that if EAs trust ACMs, they may not waste time negotiating with one another. For instance, they may not do so for defining the responsibilities of one another, leading to faster decision making. Therefore, the efficiency of an audit may be improved. Further, since conflicts are reduced, EAs' anxiety may also go down correspondingly. As a result, they may express their willingness to share information with ACMs and provide more manpower during the course of audit process.

Table 38 summarises the findings of prior questionnaire survey studies on the effects of trust on interaction and performance.

Authors	Dimensions	Results
Silva, Bradley and Sousa	Profitability and satisfaction,	Shared values and com-
(2012)	moderating effects of similari-	munication positively re-

Table 38: Trust, Interactions and Performance: Prior Questionnaire Survey Studies

	ty on the positive relationships	lated to trust, but oppor-
	between trust and performance	tunistic behaviour nega-
		tively related to trust.
		Trust improved perfor-
		mance. The positive rela-
		tionships between trust
		and performance were
		moderated by partner
		similarity. Performance
		was measured in terms of
		profitability and satisfac-
		tion.
Robson, Katsikeas and Bello	Effectiveness, efficiency, re-	Distributive fairness and
(2008)	sponsiveness, moderating ef-	partner similarity were
	fects of alliance size on the	positively related to trust,
	positive relationships between	leading to high alliance
	trust and performance	performance. Also, the

		smaller the alliance size,
		the higher the positive ef-
		fects of trust on alliance
		performance. Alliance per-
		formance was measured in
		terms of effectiveness, ef-
		ficiency and responsive-
		ness.
Arranz and Arroyabe (2011)	Satisfaction with attainments	The use of contract, rela-
	of goals, financial perfor-	tional norms and trust all
	mance and overall perfor-	positively related to per-
	mance	formance.
		Contractual mechanisms
		were more forceful in im-
		proving the performance
		of exploitation projects
		than relational norms and
		trust.

	Relational norms were
	more forceful in improv-
	ing the performance of
	exploration projects than
	contractual mechanisms.
	Performance was meas-
	ured as satisfaction with
	attainments of goals, fi-
	nancial performance and
	overall performance.
Satisfaction with attainments	The use of contract, rela-
of goals, financial perfor-	tional norms and trust all
mance and overall perfor-	positively related to per-
mance	formance.
	Contractual mechanisms
	were more forceful in im-
	proving the performance
	of exploitation projects
	than relational norms and
	of goals, financial perfor- mance and overall perfor-

		trust.
		Relational norms were
		more forceful in improv-
		ing the performance of
		exploration projects than
		contractual mechanisms.
		Performance was meas-
		ured in terms of the satis-
		faction with the attain-
		ments of goals, financial
		performance and overall
		performance.
Bien, Ben and Wang (2014)	Cooperation to achieve sales	Asset exclusivity, the use
	growth, increase market	of formal contract and in-
	shares, develop new products	formal exchange increased
	and improve information of	the level of trust, resulting
	new technology	in better cooperative per-
		formance.

		Cooperative performance
		was measured in terms of
		the cooperation to achieve
		sales growth and coopera-
		tion to increase market
		shares, develop new prod-
		ucts and provide important
		information of new tech-
		nology.
Bryan, Sinkovics and Kim	Trust, uncertainty and the anx-	Trust and technology un-
(2010)	iety of keeping confidential	certainty positively related
	information	to learning, leading to im-
		prove market perfor-
		mance.
Fiala, Rrokop and Zivelova	Inter-organisational trust and	Trust helped reduce con-
(2012)	performance in the Czech Re-	flicts and negotiation cost.
	public	As a result, supplier per-
		formance was improved

	by reducing conflicts and
	negotiation costs.

In summary, the findings of prior studies show that trust improves actors' interactions, which, in turn has a positive impact on performance. A high level of trust improves cooperation, coordination and communication. In auditing, cooperation, coordination and communication between EAs and ACMs are important elements of interactions which may enhance the effectiveness and efficiency of an external audit. Thus, it is reasonable to expect that EAs' trust in ACMs may enhance audit quality. Trust also encourages partners to share their knowledge and information. This may be applied to the relationships between EAs and ACMs. For instance, they may share their audit expertise in a specific industry with ACMs so that internal control systems can be improved. ACMs may also share information with them so that they can perform appropriate risk assessment and determine appropriate scope of audits.

Moreover, their trust in ACMs should enhance performance because trust provides the requisite flexibility for them to be able to continue to interact. This is particularly important because they may have disagreements when determining the scope of audits, materiality threshold and resources to be used, performing risk assessment and conducting unpredictable tests. They may also have disagreements when managers refuse to adjust the accounting records as requested by EAs when the case gets escalated to ACMs. Trust may allow them to have more effective discus-

sions on adjustment. Taken together, trust may encourage them to interact with ACMs, so that their performance may be improved. Therefore, the following proposition is formed to answer Research Question 3 and 4:

P4: EAs' trust in ACMs has positive effects on the interactions with ACMs and in effect, audit quality.

Figure 5 summarises the potential determinants of EAs' trust and the effects of trust on their interactions and audit quality.

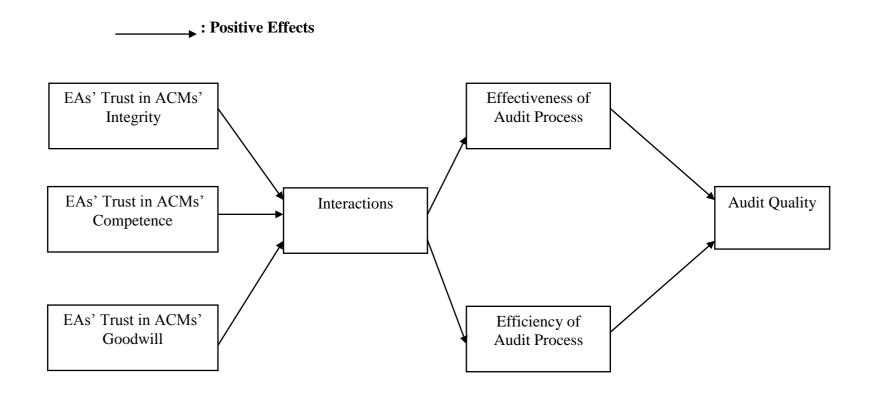


Figure 5: Trust and Audit Quality

## 7.6 Chapter Summary

This chapter begins by the discussions on the definitions of trust that allows me to better understand the meaning of trust in the context of auditing. This is followed by discussions on the determinants of trust. It can be seen that several previous studies have examined factors that influence the levels of trust and examined the correlation between trust, interactions and performance. These findings show that trust enables actors to have effective interactions, leading to improve performance. Four research propositions were formed to answer Research Questions 2, 3 and 4 stated in Chapter 1. Propositions 1, 2 and 3 were developed to answer Research Questions 2, whereas proposition 4 was developed to answer Research Questions 3 and 4.

# CHAPTER 8 RESEARCH METHODS (QUESTIONNIRE SURVEY STUDY)

## **8.1 Introduction**

The chapter discusses the research methods that are used to explore the effects of trust by investigating propositions 1 to 4 developed in Chapter 7. This chapter begins by providing justifications for the use of questionnaire survey. Thereafter, it outlines the procedures of selection of participants and explains the research instruments for this study, followed by data analysis procedures and the verification of non-response bias. The summary of chapter content is also provided.

## 8.2 Justification for the Use of Questionnaire Survey

The researcher collected the primary data using a questionnaire in order explore the effects of EAs' trust in ACMs on audit quality. A questionnaire survey can be used to directly measure the attitude or opinion of individuals. It is suitable when the questions of a questionnaire survey are standardised and can be interpreted by all respondents in the exact same way (Robson, 2002). Sekaran and Bougie (2007) suggested that data of wide geographic regions can also be gathered and anonymity can be ensured. Researchers do not need full access to remain in an organisation, so this strategy should create less ethical concerns. Although a questionnaire survey should be used for descriptive or explanatory research, it is not suitable for exploratory research with many

open-ended questions. Descriptive research is used to measure the attitude and opinion to determine the difference of phenomena, but explanatory research is used to find out or explain the relationships between different variables.

A questionnaire survey often uses cross-sectional designs with a large sample, so this strategy can enable a researcher to simultaneously investigate the relationships between variables (Easterby-Smith, Thorpe and Lowe, 2012). A sample size of a questionnaire survey should be larger than that of an interview or an experiment because it is more convenient for participants to fill out a questionnaire survey in a convenient manner. Additionally, a questionnaire survey can eliminate interviewer bias due to the absence of an interviewer. It has been suggested that 'characteristics such as ethnicity, gender, and social background of interviewers may affect the answers that respondents provide. Since interviewers are absent, a questionnaire survey does not suffer from the bias that questions are asked in different orders or in different ways' (Bryman and Bell, 2007, p.242).

Nevertheless, researchers should ensure the representative of samples and need to spend sufficient time piloting questionnaires and ensuring that a response rate is acceptable. The result of a questionnaire survey is not impervious to biases. For instance, LaPiere (1934) argued that respondents' actual behaviour may differ from their answers in questionnaire survey, implying that their answers may not adequately represent the reality. Therefore, time should be spent on follow-up procedures for non-responses. Sekaran and Bougie (2007) stated that response rates are usually low, adding that a response rate of 30 percent is very acceptable. Ethical concern is a potential problem when using a questionnaire survey because participants may fear that their identity will be leaked out if researchers disclose their information and identity to other parties.

The researcher used this strategy because the questionnaire survey study aims to explore the effects of EAs' trust in ACMs on audit quality; hence, a questionnaire survey is suitable for collecting data on their opinions about trust in ACMs and how that trust influences their interactions and audit quality. Importantly, a questionnaire survey enables the researcher to ask open-ended and closed-ended questions in an economical and convenient way. Given the distinctiveness between quantitative and qualitative research methods as discussed in Section 1.5, Part One of the questionnaire survey study should use the quantitative research method to identify the correlations between the trust variables and the variable of the perception of the quality of interactions. Part Two of this study should use the qualitative research method to explore the meanings of trust in the audit process and audit quality. In this way, the researcher can use closed-ended questions to explore the effects of trust in ACMs on audit quality, and open-ended questions to explore what factors influence their trust in ACMs and how this trust influences their interactions, which may have an impact on audit quality.

## **8.3 Questionnaire Data Collection Stage**

A questionnaire was developed and sent to EAs. The questionnaire is divided into two parts: the first part contains 20 closed-ended questions that allowed the researcher to assess the level of

EAs' trust in ACMs as well as their interactions in external audits. The study asked respondents to indicate their answers on a Likert-scale from 1-strongly disagree to 5-strongly agree. The second part comprises of four open-ended questions. Open-ended questions are used so that respondents can provide unusual and more detailed responses in their own words.

## **8.4 Selection of Participants**

The data were collected by electronic questionnaire survey from EAs with a job title of Audit Manager or above in professional audit firms performing external audits on listed companies in Hong Kong. They are likely to be knowledgeable about external audits and to have had interactions with ACMs in the past<sup>2</sup>

## **8.5 Research Instrument**

The questionnaire primarily focuses on the level of EAs' trust in ACMs and their interactions. It consists of 24 questions, most of which are adapted from previous studies. One of the benefits for adapting pre-existing questions is their high reliability and validity as they have already been tested (Hyman et al., 2006). Hence, the researcher could ask questions that convey the intended meaning.

<sup>&</sup>lt;sup>2</sup> This research did not investigate ACMs' trust in EAs because the response rate from ACMs was extremely low.

In Part One of the questionnaire, the first three questions were used to assess the perception of the quality of interactions before client acceptance. They were adapted from Butcher, Harrison and Ross (2013) and Accounting and Corporate Regulatory (2010). Questions 4 and 5 were used to measure the perception of the quality of interactions during both pre-audit and interim audit stages. Question 4 meanwhile was adapted from Deloitte (2015), while Question 5 was adapted from Contessotto and Moroney (2014). Questions 6, 7 and 8 were used to measure the perception of the quality of interactions during the severe adapted from Al-matarneh (2011) and Contessotto and Moroney (2014). Similarly, Questions 9, 10 and 11 were used to measure the perception of the quality of interactions during the reporting stage. Questions 9 and 10 were adapted from Grant Thornton and KPMG (2013), whereas Question 11 was adapted from the Accounting and Corporate Regulatory Authority.

Question 12, 13 and 14 were used to examine their level of EAs' trust in ACMs' competence; in particular, Questions 12 and 14 were adapted from Kramer and Tyler (1996) and McKnight, Choudhury and Kacmar (2002); Question 13 was created by the researcher. Questions 15, 16, 17 were used to assess their trust in ACMs' integrity and were adapted from McKnight (2002), McKnight, Choudhury and Kacmar (2002) and Kramer and Tyler (1996). Question 18, 19 and 20 were used to assess their trust in ACMs' goodwill and were adapted from Sako (1992), Sako and Helper (1998).

Questions 21, 22, 23 and 24 were used to investigate whether and how EAs' trust in ACMs affects their interactions. Questions 21 and 24 were created by the researcher. Question 22 and 23 were adopted from KPMG (2013) and PwC (2013). Prior to completing the final version of this questionnaire, its formatting was subjected to pilot-testing in order to ensure that questions were comprehensive, relevant, appropriate and efficient in addressing the issues raised in this study (Bryman and Ball, 2007).

In consonance with the suggestions of Etchegaray and Fischer (2011), the researcher sent the questionnaire to two university academics with research experience in auditing and trust. The questionnaire was also sent to one audit manager and two audit partners. Notably, amendments to questions 22 to 24 were made after receiving constructive feedback. The comments received from respondents as well as the questions before and after the amendments are included in Appendix 2.

#### **8.6 Participant Information Sheet**

A single page letter explained the purpose and content of this study. It outlined the benefits of participating in the study and stated that personal details will be treated confidentially. Further, the letter described the instructions and options on how to complete the questionnaire, the approximate time to complete it as well as instructions to complete the questionnaire electronically. A consent form was attached in the email to participants. The participant information sheet and consent form can be found in Appendix 3 and Appendix 4.

#### 8.7 Part One of the Questionnaire: Closed-Ended Questions

Part One of the questionnaire allowed the researcher to assess their level of trust in ACMs' competence, integrity and goodwill, as well as their perception of the quality of interactions with ACMs. Participants were asked to indicate their levels of agreement to the first 20 statements.

A variable representing the perception of the quality of interactions was created by taking a simple average of the scores of questions 1 to 11. A variable representing competence-based trust was established by taking a simple average of the scores of questions 12 to 14. A variable of integrity-based trust was then created by taking a simple average of the scores of questions 15 to 17. Similarly, a variable of goodwill-based trust was established by taking a simple average of the scores of questions 18 to 20. The questionnaire can be found in Appendix 5.

## 8.8 Part Two of the Questionnaire: Open-ended Questions

Part Two of the questionnaire was used to explore the role of their trust in enhancing the effectiveness and efficiency of external audits. These questions focus on how trust affects their interactions with ACMs – and in effect, the quality of an audit – thereby providing insights into the extent that they place trust in ACMs, how their trust develops and how their trust affects emphasis of audit approaches on control-based versus substantive testing. Participants were specifically asked to provide their written responses on the space allocated next to questions 21 to 24. Thematic analysis was used for open-ended questions. The researcher coded the responses of open-ended questions of the questionnaire survey and then formed different themes that enabled the researcher to answer the research questions. Open coding was used to code the data. Esterberg (2002) suggested that open coding is a process where "you work intensively with your data, line by line, identifying themes and categories that seem of interest" (p. 158). This thesis followed the data analysis and coding procedures suggested by Creswell (2009) and Esterberg (2002). The importance of these themes to audit quality is stated in Appendix 6.

This study followed the Creswell's (2009) six steps of the data analysis process as follows:

Step 1: Organise and prepare the data for analysis (p. 185). Accordingly, the researcher reviewed responses from the questionnaires and transferred the responses to a Word document.

Step 2: Read through the data (p. 185). For this step, the researcher read through the responses on the Word document as many as five times to understand the ideas conveyed by the participants.

Step 3: Begin detailed analysis with the coding process (p. 186). The researcher followed Creswell's procedure of organising the materials into segments by extending the text data and segmenting sentences into themes. For Step 3, the reasearcher had initially assigned codes to the text data by writing words or phrases next to the text data highlighted. Subsequently, the codes were reviewed three times. Some of them were found very similar, so they were combined. For example, the researcher found that "knowledge" and "ability" were very similar, so they were combined in order to produce a code of "knowledge and ability." Further, the codes of "information exchange" and "Information beyond statutory requirements" were combined to produce a code of "information exchange." The researcher also renamed some of the codes to allow them to better encapsulate a broader meaning of textual data. For instance, the researcher combined the code of "independence" and "support" to produce a new code of "independence." The codes assigned can be found in Appendices 7, 8, 9 and 10.

Step 4: Use the coding process to generate a description of the setting or people as well as categories or themes. (p. 189). For this step, codes assigned led to generalising a small number of categories or themes. The researcher had initially used the codes assigned to form themes. Thereafter, the themes were reviewed to identify similarities so that they could be combined them. Further, the researcher looked for themes with small numbers of codes so that they could be dropped or combined them other themes.

In totality, four categories were created. For instance, "experience", "involvement in monitoring progress", "support" and "integrity" enabled the researcher to form a theme to explain the factors that influence EAs' trust in ACMs. "Encourage to ask questions", "information beyond statutory

requirements" and "reporting significant issues" produced a theme to explain how their trust in ACMs positively affects information flow between them. The manner in which these themes emerged from the codes can be found in Appendices 7, 8, 9 and 10.

Step 5: Advance how the description of the themes will be represented in the qualitative narrative (p. 189). For Step 5, the researcher used the themes that emerged logically from the participants' responses to produce the findings. In Chapter 4, the researcher had prepared narrative passages for the themes. These narrative passages represent the researcher's own interpretations of why the responses could be logically grouped into themes.

Step 6: Interpret the meaning of the data (p. 189). Creswell (2009) recognised that a researcher's own background plays just as important a part of the meaning making process as a researcher's fidelity to a theoretical lens. For this step, the researcher explained the implications of the findings in the context of external audits and trust in Chapter 5. The findings of prior studies were used to explain the development of EAs' trust in ACMs and why trust is important in auditing. The researcher explained how these themes are relevant for audit quality.

## 8.9 Administration of the Questionnaire

A survey link was generated and respondents could click on it to complete the questionnaire online. Electronic questionnaire survey enabled the researcher to save cost because there was no need to print and post hard copies to 493 participants. It also helped save time because partici-

pants were able to receive the survey immediately online. Audit managers or EAs with a more senior title will not stay back in their respective offices to receive my postal questionnaires because they need to perform external audits around the world. Even they can receive my email questionnaire and complete it immediately regardless of their location (Cope, 2014). The response rate benefited from an anonymous and private approach when asking about sensitive topics.

However, some drawbacks were found in using an electronic questionnaire survey. For example, some participants had several email addresses and they did not regularly check them all. Also, internet security filters may have blocked some messages.

As many as 493 potential participants were contacted via email and asked to participate in the questionnaire survey. If they agreed to participate, a consent form along with an electronic link or an attached questionnaire were emailed to them.

## 8.10 Sample Response Rate

A total of 142 responses were obtained from the 493 potential participants. Eight responses had to be eliminated because the questionnaires were incomplete. Therefore, 134 usable responses were collected, yielding a response rate of 27.2 percent<sup>3</sup>.

The questionnaires were sent electronically to the participants in four stages. A total of 493 electronic questionnaires were sent in June 2016. The first second and third reminder of emails was sent in August, October and December of 2016, respectively. As compared to the response rate of other studies exploring the effects of trust on performance [Aulakh, Kotabe and Sahay, 1996 (39.4%); Bryan, Sinkovics and Kim, 2010 (23.29%); Carson et al., 2003 (32%); Gundlach and Cannon, 2010 (24%); Krishnan, 2005: (18%); Liao and Shi, 2015 (22%,); Mohr and Spekman, 1994 (25%); Poppo, Zhou and Li, 2015 (35.2%); Silva, Bradley and Sousa, 2012 (6.3%); Zaheer, McEvily and Perrone, 2008 (15%)], this study's response rate is deemed fairly reasonable and may present a fair reflection of EAs' views. The details of response rate can be found in Table 39.

<sup>&</sup>lt;sup>3</sup>The questionnaire did not ask questions about EAs' personal information because this information is sensitive in nature. Inclusion of these questions may significantly drop the response rate of the questionnaires returned by EAs.

 Table 39: Survey Returned

	Number returned	Percentage of Potential Participants
Initial letter	61	12.37
Reminder 1	38	7.71
Reminder 2	14	2.84
Reminder 3	21	4.26
Total	134	27.18

## 8.11 Verification of Non-Response Bias

An independent t-test was also performed on the responses of the closed-ended questions of questionnaire survey. These responses from early responders were compared with those from late responders in order to investigate whether there was any significant difference (Lambert and Harrington, 1990). Lindner, Murphy and Briers (2001) claimed that late responders are similar to non-responders. This allows a researcher to use the late responder group as a proxy for non-responders. If there is any significant difference between early and late responses, it can be inferred that non-response bias is present.

The researcher followed the procedures suggested by Lindner, Murphy and Briers (2001) and treated the last two reminders as late responses. The responses were not significantly different

between early and late responders at significance level of 1% in both cases; this implies the absence of non-response bias.

## 8.12 Chapter Summary

This chapter discusses the research method employed during the course of this questionnaire survey study. Beginning with the justification for the use of questionnaire survey, this chapter discusses the participant selection process, the data collection procedure and the research instruments. This final sample contains 134 usable responses, yielding a response rate of 27.2 percent. Procedures of data analysis and verification of non-response bias are also explained.

# CHAPTER 9 RESEARCH FINDINGS (QUESTIONNAIRE SURVEY STUDY)

## 9.1 Introduction

This chapter outlines the research questions and the manner in which they are answered. It then presents the findings of responses to closed-ended questions and open-ended questions contained within the questionnaire. Finally, a summary of the chapter's content is provided. The relevance of these findings to audit quality is discussed in Chapter 10. The research questions to be answered during the course of questionnaire survey study are as follows:

RQ2: What factors influence EAs' trust in ACMs in Hong Kong?

RQ3: Does EAs' trust affect the interactions with ACMs in Hong Kong?

RQ4: How does the interaction between EAs and ACMs impact audit quality in Hong Kong?

Research Question 3 is addressed by examining EAs' responses to closed-ended questions that assess EAs' trust in ACMs' competence, integrity and goodwill, as well as their perception of the quality of interactions with ACMs. On the other hand, Research Questions 2 and 4 are addressed by looking at EAs' responses to open-ended questions concerning the factors that influence EAs' trust in ACMs and how EAs' trust affects their interactions with ACMs.

## 9.2 Findings of Responses to Closed-Ended Questions

The researcher used independent t-tests and regression analysis in order to analyse these responses. Before presenting the findings of closed-ended questions, it is important to check the distributions of the concerned variables. Therefore, the next section presents the associated descriptive statistics.

## 9.2.1 Descriptive Statistics: Closed-Ended Questions

Variables	Obs	Mean	Standard deviation	Min	Max
1	134	3.867	0.494	2.27	5
2	134	3.482	0.561	1.67	4.67
3	134	3.761	0.625	1.67	5
4	134	3.547	0.698	1	5

**Table 40:** Descriptive Statistics (Questionnaire Survey Study)

Where

- 1 = Average score of perceptions of the quality of interactions
- 2 = Average score of EAs' trust in ACMs' competence
- 3 = Average score of EAs' trust in ACMs' integrity
- 4 = Average score of EAs' trust in ACMs' goodwill

Table 40 depicts the descriptive statistics of the average scores of variables on a scale of 1 to 5. Section 8.7 shows which questions contained in the questionnaire survey are used to measure EAs' perceptions of the quality of interactions and EAs' trust in ACMs' competence, integrity and goodwill. On average, they place their trust in ACMs' goodwill, competence and integrity higher than the middle level. In addition, the perception of the quality of interactions is higher than the middle level. Standard deviations of the average scores of these perceptions concerning the quality of interactions and their trust in ACMs' competence, integrity and goodwill are 0.494, 0.56, 0.62 and 0.70, respectively. Since the standard deviations are not 0, it provides variations for the studies.

#### 9.2.2 Independent T-tests and OLS

Section 9.2.1 shows the variables provide variations to be examined. This section presents the findings of the independent t-tests and regression analysis that allows the researcher to decipher whether their trust in ACMs' competence, integrity and goodwill positively affects the perception that trust relates to their interactions with ACMs, as well as whether the trust in ACMs encourages them to perceive that the quality of their interactions with ACMs is better.

#### 9.2.2.1 Independent T-tests

Tables 41, 42 and 43 depict that the means of their trust in ACMs' competence, integrity and goodwill are significantly higher in the group of EAs who agreed with the perception that trust positively impacts their interactions with ACMs. These independent t-tests suggest that the re-

sults are significant at p<0.05 and 0.01 but not significat at p<0.001, respectively. These results imply that their trust in ACM's competence, integrity and goodwill is positively associated with the perception that trust affects their interaction with ACMs. This finding indicates that if they place trust in ACM's competence, integrity and goodwill, they may be willing to interact with ACMs.

Group	Observations	Mean
0	54	3.36
1	80	3.56
Mean difference (MD)		-0.20
		MD < 0: p-value = 0.022*
		$MD \neq 0: p-value = 0.44$
		MD > 0: p-value = 0.98

 Table 41: Competence-based Trust and EAs' Perception that Trust Affects Interactions: 4

\* p-value < 0.05 \*\* p-value < 0.01 \*\*\* p-value < 0.001

<sup>&</sup>lt;sup>4</sup> The indicator of 1 shows that the EAs stated that trust influences their interactions with ACMs, otherwise 0. The means are the average scores of EAs' trust in ACMs' competence (Table 41), integrity (Table 42) and goodwill (Table 43). Since the mean of Group 0 (3.36) is significantly less than the mean of Group 1 (3.56), so the difference of mean between Groups 0 and 1 is significantly less than 0. MD <0 means that the mean value of Group 0 is less than that of Group 1. MD  $\neq$  0 means that the difference of mean values of Groups 0 and 1 is not equal to 0. MD > 0 means that the mean value of Group 0 is larger than that of Group 1. This applies to Tables 41, 42, 43 and 44.

Group	Observations	Mean
0	54	3.60
1	80	3.87
Mean difference (MD)		-0.27
		MD < 0: p-value = 0.0084**
		MD $\neq$ 0: p-value = 0.017*
		MD > 0: p-value = 0.99

**Table 42:** Integrity-based Trust and EAs' Perception that Trust Affects Interactions:

\* p-value < 0.05 \*\* p-value < 0.01 \*\*\* p-value < 0.001

Group	Observations	Mean
0	54	3.36
1	80	3.68
Mean difference (MD)		-0.32
		MD < 0: p-value = 0.0047**

	MD $\neq$ 0: p-value = 0.0094**
	MD > 0: p-value = 0.995

\* p-value < 0.05 \*\* p-value < 0.01 \*\*\* p-value < 0.001

According to Table 44, the mean of the perception of the quality of interactions with ACMs is not significantly higher in the group of EAs who concurred with the perception that trust affects their interaction with ACMs. As an implication, EAs' perception that trust encourages them to interact with ACMs has no significant impact on their perception of the quality of interaction with ACMs. These independent t-tests show that the results are not significant at the significance level of p<0.05, 0.01 and 0.001, respectively.

**Table 44:** EAs' Perception that Trust Affects Interactions and Perception of the Quality of

 Interactions with ACMs:

Group	Observations	Mean
0	54	3.78
1	80	3.92
Mean difference (MD)		-0.14
		MD < 0: p-value = 0.0562

	$MD \neq 0: p-value = 0.113$
	MD > 0: p-value = 0.94

\* p-value < 0.05 \*\* p-value < 0.01 \*\*\* p-value < 0.001

However, the independent t-tests only enabled the researcher to investigate whether their trust in ACMs' competence, goodwill and integrity does encourage them to interact with ACMs. However, the results do not indicate whether their trust in ACMs' competence, goodwill and integrity enhances the perception of the quality of interactions with ACMs. Therefore, the researcher used regression analysis in order to get perception regressed relating to the quality of their interactions with ACMs on their trust in ACMs' competence, integrity and goodwill.

#### 9.2.2.2 Ordinary Least Square Regression (OLS)

This section presents the results of the tests detecting the violation of assumption and investigating the relationships between different types of trust and the perception of the quality of interactions. OLS refers to a statistical technique that finds the best fit line so that the sum of the squared deviation of all the distances from the line gets minimised (Abu-Bader, 2010). The dependent variable is EAs' perception of the quality of interactions with ACMs. This is used as a proxy for audit quality because higher quality of their interactions may smooth audit work, so audit quality is higher. Independent variables are EAs' trust in ACMs' competence, integrity and goodwill. This regression examines whether higher levels of EAs' trust can enhance their perception of the quality of their interactions. If so, audit quality should be enhanced.

In the simplest form, the OLS model can be stated as:

$$y_i = \beta_0 + \beta_1 x_1 + \cdots + \beta_k x_k + \varepsilon_i$$

Where:

 $y_i$  = dependent variable *i* 

 $x_k$  = independent variable k

 $\beta_k$  = coefficient of independent variable k

 $\varepsilon_i$  = error terms

 $\beta_0$  = y-intercept

The use of OLS requires dependent variables to be continuous variables, although independent variables can be measured at any level of measurement, such as nominal, categorical, ordinal, interval or ratio (Abu-Bader, 2010). OLS is used in the questionnaire survey study in order to examine the relationship between EAs' perception of the quality of interactions with ACMs and competence-based, integrity-based and goodwill-based trust.

If these assumptions are violated, OLS will become unreliable and the results of the findings will be deemed invalid (Hair et al., 2010). Key assumptions of OLS are as follows:

Multi-collinearity

Normality of the error term distribution

Constant variance of the error terms

Independence of the error terms

The details of assumptions were discussed in Section 4.4.1. This section only presents the results of the tests investigating the violation of the assumptions. The reseacher used Pearson Correlation Matrix and Variable Inflation Factor (VIF) to detect the problem of multicollinearity. Table 45 shows that all the correlations are less than 0.9 and Table 46 depicts that VIFs are all less than 10, so it can be inferred that the problem of multicollinearity is not present. Breusch-Pagan and Cook-Weisberg test was used to detect the presence of heteroskedasticity. Table 47 shows that p-value is less than 0.001, so it can be inferred that heteroscedasticity is present.

**Table 47:** Pearson's Correlations (Questionnaire Survey Study)

Variables	1	2	3	4
1	1			
2	0.43	1		

3	0.60	0.42	1	
4	0.58	0.56	0.65	1

Where

- 1 = Average score of perceptions of the quality of interactions
- 2 = Average score of EAs' trust in ACMs' competence
- 3 = Average score of EAs' trust in ACMs' integrity
- 4 = Average score of EAs' trust in ACMs' goodwill

Table 46:	Variable	Inflation	Factors	(VIF)
	v al lable	imation	racions	

Variables	VIF	1/VIF
2	2.12	0.47
3	1.76	0.57
4	1.47	0.68
Mean VIF	1.78	

Where:

- 1 = Average score of EAs' trust in ACMs' competence
- 2 = Average score of EAs' trust in ACMs' integrity
- 3 = Average score of EAs' trust in ACMs' goodwill

# Table 47: Breusch-Pagan and Cook-Weisberg Test for Heteroskedasticity (Questionnaire Survey Study)

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Chi-square = 23.11

p-value = 0.0000\*\*\*

\* p-value < 0.05 \*\* p-value < 0.01 \*\*\* p-value < 0.001

Since heteroscedasticity is present, OLS with robust standard errors should be used to investigate the relationships between different types of trust and the perception of the quality of interactions. Table 48 reveals that the means of EAs' trust in ACMs' goodwill and integrity are positively associated with the mean of EAs' perception about the quality of interactions with ACMs at significance level of p<0.05 and p<0.001, respectively, although the mean of EAs' trust in ACMs' competence is not significantly associated. The model is significant because Prob>F is found to be less than 0.001. This result indicates that if EAs place trust in ACMs' goodwill and integrity, they may have a better perception of the quality of their interactions with ACMs.

**Table 48: OLS with Robust Standard Errors** 

Variables	Coefficient	p-value
1	0.10	0.175
2	0.29	0.000***

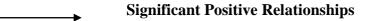
3	0.19	0.014*
Cons	1.71	0.000
R-square	0.43	

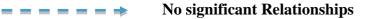
\* p-value < 0.05 \*\* p-value < 0.01 \*\*\* p-value < 0.001

Where:

- 1 = Average score of EAs' trust in ACMs' competence
- 2 = Average score of EAs' trust in ACMs' integrity
- 3 = Average score of EAs' trust in ACMs' goodwill

The findings of closed-ended questions enable the researcher to answer the questions whether their trust in ACMs encourages them to interact with ACMs, as well as whether their trust enhances their perception of the quality of their interactions with ACMs. The findings in this section provide answers to Research Question 3. The summary of the findings of closed-ended questions is presented in Figure 6.





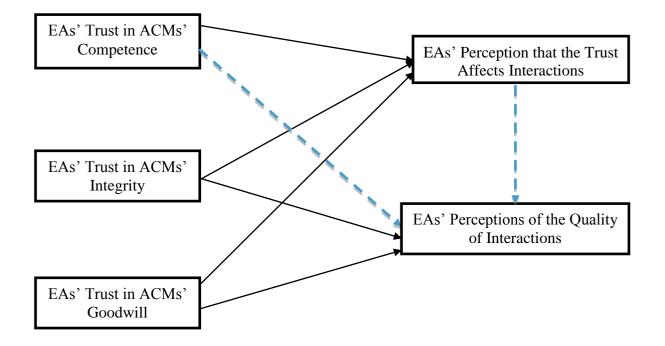


Figure 6: Findings of Closed-Ended Questions

#### 9.2.3. Findings of Responses to Open-Ended Questions

Based on the findings of these closed-ended questions, the research observes that EAs' trust in ACMs positively affects their interactions with ACMs, but these findings do not help answer Research Questions 2 and 4. Hence, the researcher now turns to the findings of open-ended questions. For this purpose, the researcher categorised the responses to open-ended questions 21-24 into five themes that helped answer Research Questions 2 and 4. Theme One answers Research Question 2. Themes Two, Three, Four and Five answer Research Question 4.

# 9.2.3.1 Antecedents of EAs' Trust in ACMs

# Theme One: EAs Develop Trust in ACMs If They Perceive that ACMs Have and Display Competence, Goodwill and Integrity.

Firstly, it is important to investigate the factors that influence EAs' trust in ACMs because trust can only be managed if the factors that influence EAs' trust can be clearly identified. These factors will, in effect, encourage them to interact with ACMs, resulting in better perception of quality of interactions with ACMs, so that they are willing to share information, cooperate and communicate with ACMs.

The researcher discusses three sub-themes below with regard to how Theme One emerged from the sub-themes. The sub-themes are discussed in three parts: 1) competence, 2) goodwill and 3) integrity.

In general, EAs reported that perception of ACMs' competence enhances their trust in ACMs. The perception of competence includes the perception of ACMs' ability, experience, professionalism and accounting and finance knowledge. Respondent 91 (R91) summed:

"Trust is affected by audit committee members' competence and commitment" (R91).

Thirteen other participants concurred that knowledge and competence are important for the development of EAs' trust in ACMs.

Other participants stated that finance or accounting expertise is important for EAs to trust ACMs. Although ACMs have experience, they do not understand the impacts and rationales of the audit procedures and approaches, if they do not have accounting nor finance background. Therefore, EAs will not want to waste their time interacting with ACMs because they do not expect useful comments on their approaches to ensure their audit work goes smoothly. R4 mentioned:

"Trust is built by audit committee members' experience and financial background" (R4).

Five other participants agreed that finance and accounting expertise is essential for EAs to trust ACMs. ACMs with broad experience understand strengths and weaknesses of internal controls in different industries. In particular, ACMs can share broad experience with EAs about how to oversee financial reporting in different industries. In this regard, R69 suggested:

"Trust is high if audit committee members are broadly experienced" (R69).

Six other respondents provided similar responses. Apart from broad business experience, specific industry experience pertinent to the company is important. If ACMs have specific industry experience, EAs do not need to waste time explaining rationales behind their audit approach for a company in a specific industry. Time for meetings can be better spent on significant issues. For example, ACMs who have experience in the energy industry may not understand the strengths and weaknesses of the property industry's internal control systems. R28 explained that,

"Trust is affected by AC members' experience, knowledge of its industry......" (R28)

R30 and R129 provided similar responses. If ACMs are competent, EAs will expect ACMs to share their experience with them and ask pertinent questions when meeting the ACMs. If ACMs have accounting or finance knowledge, they will be able to discuss more complex and significant accounting issues such as the appropriateness of accounting policy and estimates with ACMs because they can trust the fact that ACMs understand their point. If ACMs have generic or specific industry experience, they will be able to decipher the rationales of internal controls. Resultantly, they trust that ACMs can answer their questions about the rationales of internal control systems.

Although ACMs may have competence in terms of experience and accounting and finance expertise, it will be difficult to believe that ACMs will actively seek to improve quality of an audit if they do not have goodwill. ACMs' goodwill can be evidenced by ACMs' diligence and independence of executives. If ACMs are not diligent in overseeing financial reporting, their oversight will become ceremonial at best. If ACMs are not independent of executives, they will not believe that ACMs will use their discretion to support the position of EAs even though their position may better reflect the financial position of a company. In this regard, R65 stated:

"Trust is affected by audit committee members' competence and involvement. No involvement of audit committee members leads to low level of trust, resulting in low interactions" (R65).

If ACMs are not involved in overseeing a company's financial reporting, they will not understand its current activities and hence, cannot be described as 'diligent.' R28 agreed by responding that,

"Trust is affected by audit committee members' experience, level of involvement in understanding current development activities of the company". (R126)

R69 provided more examples about the involvement and diligence in monitoring the current activities of a company by stating:

"Trust is affected by whether audit committee members had timely reviews on budget vs. actual, follow ups on prior year audit issues, action plan and execution, internal audit activities, reviews and approval, input and follow ups, etc." (R69).

R126 and R38 provided similar responses. If ACMs are not diligent in following up issues found in prior audit and action plans, EMs will not believe that ACMs are effective in overseeing management. At the same time, if ACMs do not have timely reviews on budget, they will not believe that ACMs use budgetary control to evaluate the reasonableness of a company's reported financial position. If ACMs do not follow up on issues of interim audit activities, they cannot believe that they can depend upon the work of internal audits. Therefore, the level of trust is low.

Even if ACMs are competent and diligent, the lack of ACM independence will undermine EAs' trust in ACMs. R32 support this view by stating that:

"Trust is low if AC members are not independent from the executives" (R32). R114, R35, R53 and R37 provided similar responses.

R22 explained that if ACMs have close connection with management, they will neither objectively evaluate and monitor performance of management nor support EAs in cases where they have disagreements with management. If the board and controlling shareholders have close connection with ACMs, they will not believe that the board or controlling shareholders will use their power to oversee the activities of ACMs. The response of R22 reflects this sentiment. "Trust is low if AC members have close connection with controlling shareholders, board and management because there may be less incentive for them to take up the monitoring role" (R22).

Without ACMs' diligence and independence, EAs do not believe that ACMs enable them to ensure their audit work is conducted smoothly. If ACMs' integrity is high, they will be able to trust ACMs' representations by believing that the information provided to them is reliable. For instance, they can ask ACMs questions about internal control weaknesses, fraud indicators, integrity and performance of management, litigation in progress, significant risk of the industry, ongoing concern problem, and changes of accounting policy, among others. The answers to these questions are important for EAs to plan their audit, determine the scope of audits and provide recommendations. Since ACMs' reliable representations ensure their work goes on smoothly, they will place more trust in ACMs. R119 stated:

"Trust is affected by ..... integrity, independence..... and so on" (R119).

R11, R15, R30, R88 and R118 provided similar responses. In conclusion, EAs' trust in ACMs is enhanced by their perception in ACMs' competence, goodwill and integrity. If ACMs are perceived to be competent, they will believe that ACMs understand their points and that they will communicate effectively. If ACMs are perceived to have goodwill, they will believe that ACMs are independent of executives and support their position. They will also believe that ACMs oversee accounting processes and internal control systems diligently, so that they can rely on a firm's internal control systems. If ACMs are perceived to have a high level of integrity, they will believe that the information received from ACMs is reliable. Viewed collectively, this will result in a high level of trust.

#### 9.2.3.2 EAs' trust in ACMs, Better Understanding and Discussions

# Theme Two: EAs' Trust in ACMs Enables EAs to Better Understand Audit Risk and Improve Discussion

Based on Theme One, the researcher understands the factors that influence EAs' trust in ACMs, but the understanding of these factors *per se* does not answer the questions of whether and how EAs' trust affects their interactions with ACMs. In Section 9.5.2, the researcher investigates how EMs' trust in ACMs allows them to have better interactions with ACMs, resulting in a better understanding of audit risk and improved discussions.

The researcher discusses how Theme Two emerged from two sub-themes below: firstly, better understanding of a company's audit risks, and secondly, high quality of discussions between EAs and ACMs.

## 9.2.3.2.1 Better Understanding of Audit Risks of a Company

ACMs enable EAs to understand the operations and risk of a company because they provide useful information about, for example, the appropriateness of business plans and effects of significant contracts on a company's profits. After engaging in discussions with ACMs, they can incorporate ACMs' comments into their audit plans as well as scope of audit. Therefore, such discussions ensure that they will not miss significant risk areas. R69 agreed that, "We can have deeper interactions in discussions helping understanding the points, disagreements and risks. We can have more sharing of thoughts on risk areas" (R69).

R4, R18, R23, R25, R33, 48, R69 and R47 provided similar responses. R49 provided examples of potentially high risk areas in business plan and significant contracts.

"We will be advised about their business plan and significant contracts in a very early stage, allowing both of us to discuss with sufficient time rather than in a rush at a last minute" (R49).

If EMs have a good understanding of the business plan and significant contracts of the company, they will be able to discern whether the business plan is too aggressive or will expose the firm to unacceptable levels of risk. Understanding the impacts of significant contracts enables EAs to evaluate whether the company relies too heavily on a few revenue sources. If the business plan is not realised or if the company loses a significant contract, managers will be under pressure to misstate financial statements. Possessing this information enables them to plan ahead in a better manner.

If EAs are willing to provide details of unpredictable tests, ACMs will be able to comment on the appropriateness of these tests. Hence, the tests are more likely to detect material misstatements of financial statements. R129 expressed that,

"I am slightly more inclined to give details of unpredictable tests, material levels, risk areas of the audits and responses" (R129).

EAs' trust encourages them to discuss issues at an early stage with ACMs. If that is the case, they will have more time to adjust their audit plan and approaches at an early stage. R53 said that,

"We can discuss audit issues more often and at an earlier stage. We can communicate the audit approaches at a more persuasive manner and at earlier stage to deal with the feedback from audit committee members" (R53).

Their trust also encourages them to incorporate ACMs' comments on audit plan. By doing so, they will be able to effectively design the audit plan by taking the operation and risk of a company into consideration. R79 highlighted:

"Comments from ACMs are very important because their insights provide more information about how the audit should be performed. Therefore, if auditors can incorporate the comments from ACMs, audit plan will be more appropriate to the significant areas for an audit. We can have deeper discussions. High levels of trust in audit committee members motivate us to discuss our views with them and incorporate their comments in our audit plan. Of course we do what is necessary to do but we can improve audit quality when we obtain their insights" (R79).

Their trust in ACMs encourages them to obtain and utilise more useful information from ACMs, which in turn, enables them to plan their audit.

## 9.2.3.2.2 High Quality of Discussions between EAs and ACMs

EAs' trust helps enhance the quality of discussions through improved mutual understandings and greater openness of discussions. R8 explained why trust plays such a key role in communication: "If trust is higher, it is easier to understand expectations of audit committee members. Higher trust means more effective communications" (R8).

R48 highlighted that in addition to the improvement in the quality of general discussion, the nature of discussions over causes of issues and their impacts also improves. R48 claimed that,

"I can be more open with ACMs, so we can have better quality discussions over the reason of issues and impacts" (R48).

R18, R9, R29, R33, R42, R49, R65, R66, R74 and R129 provided similar responses. If EAs can be open and candid with ACMs, they can freely initiate discussions about significant accounting policies, appropriateness of accounting estimates, internal control weaknesses and integrity and performance of management. Since the quality of discussions is improved, ACMs and they will be able to engage in more in-depth discussions.

Their trust in ACMs encourages them to spend more time in meeting with them. R11 opined:

"If trust is low, I do not spend much time explaining but do basic communications as required by standard" (R11).

R10, R30 and R130 provided similar responses. In summary, a high level of trust enables EAs and ACMs to exchange information, spend more time on discussions and have high quality discussions. They can also better understand the risk of a company. Therefore, they have more information about company operations and develop a better understanding of the high risk areas so that they can focus their resources in a better manner.

# 9.2.3.3 EAs' Trust in ACMs' Integrity and Their Assessment of Managers

# Theme Three: EAs' Trust in ACMs' Integrity Improves Their Willingness to Provide ACMs with an Assessment of the Quality of Managers

Themes Two, Three, Four and Five all combine to address Research Question 4. Theme Two was considered in S.9.2.3.2; the researcher now turns to Theme Three. The quality of management includes the ability, style, integrity and performance of management. Although EAs should have assessed this quality at the planning stage, they may need to re-assess this quality during the audit. A high level of EAs' trust in ACMs' integrity encourages them to listen to ACMs' comments on the quality of management. For instance, they may receive useful information from ACMs about the irregularities of financial reporting certified by management and internal control weaknesses that are not ratified by management, as explained by R22,

"If trust is high, I am more willing to listen to know what management is doing" (R22).

Their trust in ACMs' integrity also encourages them to share sensitive information about the quality of management with ACMs, such as inappropriate accounting estimates used by executive managers, dishonest information provided by management to mislead EAs, low levels of cooperation of management as well as internal controls overridden by management. If ACMs possess this information, it may usefully influence their actions with respect to executive management. As a result, higher quality management may be able to implement more effective internal control systems and accounting processes. R71 elaborated:

"If trust in ethics of AC members is low, we are more hesitant to criticize the performance of management to AC members (In Executive Session) because our views on management and internal controls are communicated back to executive management by certain AC members" (R71).

R71, R57, R94, R103 and R109 provided similar responses. R31 provided examples of sensitive information, which can pertain to managers' judgment in accounting process and forecasts. If EAs share this information with ACMs, the latter will be able to determine whether judgments are inappropriate and forecasts too aggressive. For instance, management can manipulate recoverable amount of non-current assets upward if forecasts of future cash flow are biased. Therefore, impairment loss can be reduced, resulting in increased net income. If EAs are willing to share this information with ACMs, the latter will be able to require management to adjust cash flow forecast so that it becomes more difficult for managers to manipulate impairment loss. In this regard, R31 contended:

"High trust may impact the way you discuss how management might be biased in their judgments e.g. when looking at forecasts" (R31).

The quality of management includes the style of management. R105 highlighted that,

"If trust is high, you can be more candid in private conversations, for example, about style and quality of senior management" (R105).

Style of management is another important indicator for EAs to detect the manipulation of earnings. If managers are too aggressive, they may be more likely to manipulate earnings upward for higher bonus. If EAs know the style of managers from ACMs, they will understand the fact that representation by managers may not be reliable and thus, put more effort into corroborating managers' representations.

To conclude, if EAs place trust in the integrity of ACMs, on the one hand, they will believe that ACMs will not communicate their comments back to management, so that they will be willing to share their assessment of the quality of management to ACMs. If that is the case, ACMs will be able to determine whether the management is appropriate to the company. On the other hand, if they do trust ACMs, they will be willing to accept ACMs' comments relating to the quality of management from ACMs. This, in turn, will enable them to determine the level of integrity, ability, style as well as performance of managers so that they can assess the likelihood that managers engage in aggressive earnings management.

#### 9.2.3.4 EAs' Trust in ACMs' Ability, Audit Findings and Recommendation

# Theme Four: EAs' Trust in ACMs' Ability Encourages EAs to Diligently Discuss Findings and Recommendations

Theme Four forms part of the addressing of Research Question 4. Three sub-themes below are discussed in order to explain how Theme Four emerged: 1) abilities and attitude towards recommendations; 2) driving management to make a change; and 3) open and detailed discussions about recommendations and reporting.

## 9.2.3.4.1 Abilities and Attitude towards Recommendations

Effective corporate governance requires that ACMs take the recommendations of EAs seriously and have the ability to implement them. If that is not the case, EAs will be disinclined to waste their time exploring different alternatives with ACMs. If their level of trust in ACMs is high, they will be more willing to engage effectively. They need to explore alternative recommendations and ACMs need to determine the most suitable methods about the operation of their company. R38 stated:

"If we trust audit committee members are capable, we discuss all the audit adjustments, including adjusted and unadjusted and give recommendation when we figure out any room for improvement" (R38). R90 provided similar responses. If they believe that ACMs take the recommendations seriously, they will understand that ACMs want to improve audit quality. R109 seemed to agree:

"I will provide more opinions about internal control or control environment. I am able to openly voice my opinions and concerns and my opinion is taken seriously" (R109).

Similar responses were provided by R18, R20 and 26.

#### 9.2.3.4.2 Driving Management to Make Changes

Although ACMs may have the ability to implement and are serious about EAs' recommendations, necessary changes will not be made if they do not have the power to drive management in order to make changes. R22 claimed that,

"We are more willing to make in-depth analysis and provide more value-added recommendations because we believe audit committee members can drive management to make a change" (R22). In-depth analysis assumes significance because EAs and ACMs need to discuss the feasibility and effectiveness of these recommendations. If EAs' trust is low, their findings and recommendations will be limited to regulatory requirements because they will not have interactions with ACMs and inputs, such as identification of significant risks. In this regard, R122 said:

"The level of trust is high one would report it to the AC even if management opposes the recommendation if management are reluctant to accept the recommendation" (R122).

R22 provided similar responses. If they trust that ACMs do have the power to require managers to implement recommendations suggested by EAs, they will be willing to explore alternative recommendations.

# 9.2.3.4.3 Open and Detailed Discussions about Findings and Recommendations

The final sub-theme of Theme Four pertains to EAs' willingness to spend time openly discussing detailed as well as technical issues. If EAs trust ACMs, they will be open about the possibility of discussing significant issues and making recommendations to ACMs. For instance, they may find that accounting estimates are inappropriate or

forecasts too aggressive when compared to other companies within the same industry. In these cases, it is important that they can discuss issues openly with ACMs. They may also openly discuss new accounting or auditing issues with ACMs, and exchange their experiences and ideas about how to improve financial reporting or internal controls.

For example, if a new accounting standard of revenue recognition has been used, EAs and ACMs will be able to share their experiences and views on how to oversee financial reporting of revenue recognition. Therefore, they are more likely to detect manipulation of revenue. R95 stated that,

"If trust is high, there are more tendencies to be open to new ideas and recommendations" (R95).

Responses of R16, R18, R46, R91, R95, R107, R111, R114 and 124 are similar to those mentioned above. Feedback from ACMs is important not only at the planning stage, but also at the stages of recommendation and reporting. If EAs are better informed about ACMs' feedback, the operations and nature of a company will be thoroughly considered. This implies that the recommendations will be more appropriate for a company, as indicated by R53:

"If trust is high, I will be more open with their feedback and more willing to provide recommendations to the client" (R53).

Furthermore, EAs' trust encourages them to point out the potential areas for improvements. R87 agreed:

"The audit team would be more candid in pointing out potential areas that need improvements. If it lacks the trust, the audit team might be more cautious in raising the recommendations with the fear that the audit committee might "twist" the facts and accuse them of not doing a good work" (R87).

EAs' trust even encourages them to spend more time discussing the details of their recommendations and reporting. R117 suggested:

"Trust does not affect my openness but I am willing to spend more time discussing the rationale behind my recommendations" (R117).

Their trust also plays an important role in encouraging them to spend more time exploring different alternatives of recommendations. To that end, R136 said:

"If trust is high, I am more likely to take time exploring recommendation options" (R136).

The response of R118 is similar to that of R136. More time spent on discussion can be reflected in the number of meetings held by EMs with ACMs. In this context, R47 said;

"If trust is low, I will have no meetings or less meetings with audit committee members" (R47).

Without trust, meetings may be used for compliance purposes only to meet the minimal standards of audit. Meetings cannot be used to serve the purpose of having in-depth discussions. R21 commented:

"If trust is low, meetings tend to be for compliance" (R21).

R54 provided a similar response.

Discussions must go into detail when discussing auditing and accounting issues. If that is the case, EAs and ACMs will be able to share significant industry experience as well as accounting and auditing knowledge in order to improve a firm's internal control systems. R79 stated:

"If trust is high, more interactions occur. It helps how deep we discuss the matters with them" (79).

Responses of R31, R65, R68, R79, R77 and R101 are similar to those mentioned above.

In conclusion, if EMs repose their trust in ACMs, they will believe that ACMs will take their recommendations seriously and have the ability and power to implement these recommendations. They will also spend more time on open discussions which will become more detailed as opposed to merely be 'ceremonial' to meet the minimum requirements of audit standards.

#### 9.2.3.5 EAs' Trust in ACMs and Audit Strategies

# Theme Five: EAs' Trust in ACMs Encourages EAs to Select Control-based More Than Substantive-based Testing.

This final theme contributes to answering Research Question 4 and comprises of two sub-themes emerging from responses to the open-ended questions: 1) audit risk and internal control 2) tone from the top.

## 9.2.3.5.1 Audit Risk and Internal Control

If the level of trust is high, perceived audit risk is low. This means that control-based approaches can be utilised because EAs believe that ACMs perform their roles effectively in order to monitor financial reporting as well as internal controls. Therefore, EAs believe that they can depend upon internal control systems for the audits. It is not always possible for them to substantively audit every transaction in a company, but they can definitely test the procedures and controls which transactions go through using the control-based approach. R23 explained the view that:

"If trust is high, risk will be less, so more control-based tests can be used" (R23).

If EAs trust ACMs, they can depend upon ACMs' statements as evidence in an audit. By doing so, they can corroborate ACMs' statements with substantive tests that they perform and the evidence becomes more reliable. For example, they can ask ACMs questions about the procedures of determining the net realisable values of inventory and whether they write off the cost of inventory if the cost of inventory is more than the net realisable value. They can then perform substantive tests to verify the records of inventory. If the records show significant difference from what is suggested by ACMs, they should be aware that managers deviate from standard procedures for writing off the cost of inventory. EAs may require managers to adjust the accounting record of inventory so that managers cannot inflate the amount of earnings. However, if EAs do not trust ACMs, they will not be able to depend upon ACMs' statements to ascertain the procedures of writing off cost of inventory, so that they will be unable to ascertain whether managers deviate from standard procedure of the company in order to determine the amount of inventory to be written off. EAs can only use their experience to judge it. R47 stated:

"If trust is high, we may trust their statements, so we prefer to use control-based approach" (R47).

R37, R69, R103, R86, R88, R111, R118, R119 and R127 provided similar responses. If EAs trust the fact that ACMs are effective monitors of financial reporting, they will also believe that audit risk is reduced. As a result, they can depend more on controlbased tests supplemented with substantive tests.

# 9.2.3.5.2 Tone from the Top

An effective internal control system should have appropriate support from ACMs. If ACMs are unable to set a good tone, managers may not care about the effectiveness of its internal control systems. Therefore, EAs will not trust that their internal control systems are effective. R31 specified:

"If trust is low, it indicates a lack of care of audit committee members (tone from the top)" (R31).

R33 claimed that,

"If higher trust translates into a better assessment of governance structure, higher perception of the tone from the top, a more control-based audit might be an option" (R33). The responses of R79 and R129 are similar to the ones observed above. In summary, if EAs believe that tone from the top is appropriate and that ACMs are able to effectively oversee internal control systems, audit risk is diminished, so that they can use more control-based tests supplemented with substantive tests. Figure 7 summarises the findings of open-ended questions.

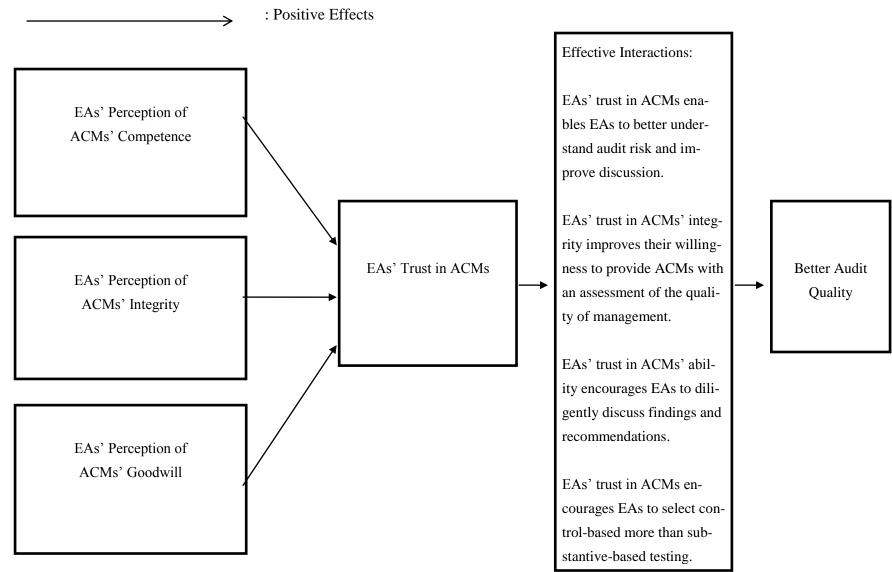
# 9.3 Chapter Summary

This chapter first presents three research questions to be answered by the questionnaire survey study as follows:

- •RQ 2: what factors influence EAs' trust in ACMs in Hong Kong?
- •RQ 3: does EAs' trust have positive effects on their interactions with ACMs in Hong Kong?
- •RQ 4: how does EAs' trust in ACMs impact their interactions and audit quality in Hong Kong?

The findings of closed-ended questions helped answer Research Question 3. Independent t-test reveals that EAs' trust in ACMs' competence, integrity and goodwill encourages them to interact with ACMs. The results of regression analysis suggest that their trust in ACMs' integrity and goodwill augments their perception of the quality of interactions with them. Therefore, their trust affects their willingness to interact and the perception of the quality of interactions.

The findings of open-ended questions helped answer Research Questions 2 and 4. The findings show that EAs' trust in ACMs develops from their perceptions of ACMs' competence, goodwill and integrity. These findings demonstrate that their trust encourages them to have more effective interactions with ACMs throughout these audits. The summary of the findings of open-ended questions is presented in Figure 7.



**Figure 7: Findings of Open-ended Questions** 

# CHAPTER 10 DISCUSSION (QUESTIONNAIRE SURVEY STUDY)

# **10.1 Introduction**

The results of this questionnaire survey study support the viewpoint that EAs' trust encourages them to interact with clients' ACMs. Their interactions are attributed to the fact that they are interested in ensuring that agency cost is reduced to the minimum and that information asymmetry is reduced. They share a common objective in detecting earnings management so that shareholders' interests are protected (Whittington and Pany, 2001; Fama and Jensen, 1983; Alchain and Demsetz, 1972). If they have effective interactions, they may be able to discuss important issues in detail, such as audit plan, internal controls, risk assessment and application of accounting estimates as well as accounting policy. These issues have an impact on audit process, efficiency, effectiveness and audit quality. This chapter discusses the findings obtained in Chapter 9 by comparing the findings of the questionnaire survey study to those of prior studies. A summary of the chapter's content is also provided.

#### 10.2 Discussions on Findings of Responses to Open-ended Questions

#### 10.2.1 Determinants of EAs' Trust in ACMs

This study finds that EAs develop trust in ACMs if they have and display competence, goodwill and integrity. If ACMs are perceived to be competent, EAs may believe that ACMs understand their points. This may then allow them to communicate effectively. If ACMs are perceived to have goodwill, they are likely to believe that ACMs are diligent in overseeing financial reporting and independent of executives. Hence, they may feel that ACMs' presence is not ceremonial and that ACMs are likely to support their stance. If ACMs are perceived to have a high level of integrity, they may believe that the information received from ACMs is reliable. The development of their trust in ACMs pertains to the likelihood of obtaining positive outcomes in an external audit by interacting with ACMs. Their trust can be regarded as the expectation that they know what ACMs do, so that they can adjust their efforts in communication, information sharing and cooperation.

The findings of antecedents of their trust in ACMs concur with the results of prior studies. Although there is limited extant literature on EAs' trust in ACMs, these findings are consistent with the results from that of previous studies, which examine their level of trust in clients' managers. For example, in their study of evaluating client perceptions about the seriousness and frequency of potential communication barriers in external audits, Golen (1997) found that inadequate common accounting knowledge and impaired understanding of technical accounting terms reduced the level of trust between EAs and client management. Inadequate knowledge combined with the lack of understanding can be regarded as the lack of competence. In their study of trust in clients' managers, Shaub (1996) noted that EAs place trust in clients' managers because of the perception that managers have a high level of goodwill. In particular, he observed that the quality of communication and their evaluation of managers' independence has a positive impact on their

trust in clients' managers. Quality of communication and managers' independence can be regarded as goodwill.

In their study of examining EAs' trust in clients' managers in the context of their disagreements, Rennie, Kopp and Lemon (2010) reported similar issues, but also noted that they placed trust in clients' managers due to the perception that managers displayed a high level of integrity. They found that the openness of communication (integrity) and concern (goodwill) during a disagreement were positively associated with trust.

The results from other studies in adjoining fields support the view that trust is established because partners perceive that the other party displayed integrity, competence and goodwill. In the context of business-to-business financial service relationships between managers and customers, Theron, Terblanche and Boshoff (2011) observed that relationship managers trust their clients if their clients display competence and that clients trust relationship managers if they display competence, effective communication and customisation. The findings in this study are also consistent with the views of Burke et al. (2007) who investigated the effects of trust in the relationships between supervisors and subordinates. They reported similar results that trust is formed due to their perception of competence, but specifically observed that integrity positively affects trust between supervisors and subordinates. Knoll and Gill (2011) found in the study of trust in the relationships between supervisors, subordinates and peers that in addition to ability and integrity, benevolence (which is similar to goodwill) is a significant factor that positively affects people to repose their trust in supervisors, subordinates and peers in workplace.

The findings in this study are also in consonance with the viewpoint of Lapidot, Kark and Shamir (2007), who examined trust building and trust erosion in the correlation between supervisors and subordinates. They suggested that subordinates are more likely to recall the incidents of trust erosion than incidents of trust building. Lapidot, Kark and Shamir (2007) reported that if supervisors display integrity, benevolence and ability, subordinates may place trust in them. However, if supervisors lack integrity, benevolence and ability, they will reduce their level of trust in their supervisors. In their study of trust in the relationship between a buyer and a seller at the growth stage of a company, Dowell (2013) made similar observations, but provided additional insights into how integrity trust and goodwill trust are formed. They specifically observed that integrity trust was formed by honesty, integral actions and candid responses, and that goodwill trust was formed by discretionary activities undertaken by partners and positive attitude towards partners.

In the context of an external audit these findings suggest that ACMs are required to display high levels of competence, integrity and goodwill so that EAs are encouraged to place their trust in them. For instance, only being competent is not sufficient to encourage EAs to interact with them. They must display integrity and goodwill as well.

#### 10.2.2 Better Understanding of Audit Risk and Better Quality of Discussions

This study notes that trust plays an important role in the relationships between EAs and ACMs in that it improves quality of discussion and information sharing between them. The findings have implications for audit process and effectiveness as it implies that they could receive more information from ACMs which improves their understanding of clients' audit risk.

Whilst there are limited studies within the audit discipline that have explored these issues, these findings are consistent with results from previous studies in adjoining fields in that trust improves mutual understanding, leading to better interactions. For example, in a study that explored the conditions that improve the cooperative relationships between family businesses, Hadjielias et al. (2015) noted that trust was important for the establishment and maintenance of cooperative relationship and mutual understanding between family businesses. Trust between family leaders was important in building altruism and collective thinking in order to sustain the cooperation between their respective firms.

The findings in this study also find supports from Krishnan (2006), who examined the moderating effects of uncertainties on the positive relationships between trust and performance in international alliances. In the study, it was found that trust enhances mutual understanding between actors and reduces the cost of inter-partner conflict, thus leading to enhanced performance. In their study of determinants of international joint venture, Ren, Gray and Kim (2009) suggested that trust increases mutual understanding and mutual benefits, so that communication is improved, thus resulting in better performance. In their study of citizens' trust in government and citizens' efforts towards improving the livability of surroundings, Edelenbos and Eshuis (2012) noted that the level of trust between citizens and government is enhanced, leading to better mutual understanding. If that is the case, the citizens will endeavour to suggest ideas on how to improve the livability of their surroundings.

The findings of prior studies also support the view that trust improves the quality of discussions, so that partners are willing to share information. For instance, in a study that explored the connection between trust and interactions over time in a collaborative project within the education industry, Oortmerssen, Woerkum and Aarts (2014) observed that trust boosted interactions and vice versa. They found that trust enhances the openness for discussions and responsiveness to questions. They also confirmed that trust increased the speed of conversations between board members. In turn, this implies that discussions and interactively shape an interfirm relationship, Minnar et al. (2017) found that after the establishment of trust, their behaviour was more cooperative and the performance of contract was found to be more effective. The managers exchanged ideas through day-to-day interactions as well as their business plans. They became open to discussing the issues of savings in projects.

In their study of the role of trust and accounting information in the context of public sector partnerships, Bogt and Tillema (2016) observed that trust implies greater openness and better information sharing. Similarly, in a study which explored how contracts, control structures and trust interactively shape and change an interfirm relationship, Minnar et al. (2017) noted that with trust, partners became open to discussing the issues of savings in facility management projects and diligent towards discussing the issues of service and operation in the meetings.

In the context of an external audit, these findings suggest that EAs' trust improves mutual understanding between ACMs and them. If they trust ACMs, they will become willing to share information with ACMs and diligently discuss risk factors as well as audit plans with ACMs. ACMs can then provide their comments about the appropriateness of risk identification and audit plans. Their trust in ACMs encourages them to incorporate ACMs' comments into their audit plan. In doing so, the scope of audit becomes more appropriate and it becomes possible to identify significant risks at the planning stage. As a result, they can design subsequent audit approaches in order to target the significant risk area. Consequently, audit process is improved and audit effectiveness is enhanced, which then leads to improved audit quality.

According to Canadian Chartered Professional Accountants (2014), one of the key areas affecting audit quality is the quality of communications and interactions between ACMs and EAs. Accounting and Corporate Regulatory Authority (2010) stated that open and effective communications between ACMs and audit partners are an important factor in enhancing regular interactions between them, thus leading to high audit quality. Chartered Professional Accountants of Canada (2014) and HKCPA (2015) agreed that they should interact with one another to determine the appropriation of risk identification. Through these interactions, they can improve their understanding of business risk or financial risk of their clients, so that they will be able to improve the assessment of their clients' risk. Consequently, they will more effectively determine materiality thresholds to be used in an external audit, and the extent of dependence on and testing of internal controls over financial reporting. By doing so, audit quality may be enhanced.

After identifying the risks, EAs should communicate with ACMs on how they customise their audit plan for their clients' situation in accordance to the level of risks (Accounting and Corporate Regulatory Authority, 2010). For instance, they should discuss the locations to be audited and assets to be verified (Chartered Professional Accountants of Canada, 2014). Meanwhile accounting and Corporate Regulatory Authority (2010) and HKICPA (2015) suggested that one of the most important interactions between them is the review and discussion of the audit plan. This not only allows ACMs to understand and approve the scope of the audit and gain insight into the audit approach of the audit team, but also allows them to understand clients' business and business risks (HKICPA, 2015).

They should discuss the rationales supporting important audit planning decisions (with ACMs) in accordance with the risks of a company and whether their analysis of a company's business risks demonstrates sufficient knowledge of the business (HKICPA, 2015; Chartered Professional Ac-

countants of Canada 2014). In addition, they must discuss about finding ways of ensuring effectiveness and efficiency of an external audit before the audit is actually performed (HKCPA, 2015; Chartered Professional Accountants of Canada, 2014). For example, they should set up the timeline for the communication with key deliverables (HKICPA, 2015; Chartered Professional Accountants of Canada, 2014).

After formulating an audit plan, they can discuss the estimation of resources scheduled according to the audit plan, such as partner leadership and involvement, specialised resources, industry experience as well as expected levels of technical consultations (Chartered Professional Accountants of Canada, 2014). In order to ensure sufficient resources for an external audit, they should determine the appropriate audit fees with ACMs (HKICPA, 2015). Chartered Professional Accountants of Canada (2014) suggested that they should discuss the reasonableness of audit fees with regard to the size, complexity and risk of the engagement as compared to similar engagements so as to ensure that the proposed audit fees are sufficient for fully implementing the activities in an audit plan. If they do not have sufficient interactions with ACMs, they may not be able to discuss audit plans and procedures in detail, so that the proposed audit fees may not provide sufficient resources for them to be able to perform audit procedures. Due to insufficient resources, audit quality remains low.

In summation, if EAs trust ACMs, they may be able to communicate issues early enough, so that they can deal with the comments from ACMs well before they start performing audit procedures. Therefore, they can design an appropriate audit plan with comments from ACMs because they may then have a better understanding about the tone from the top, operations, indicators of fraud, integrity of management as well as perceived effectiveness of internal control systems. This information also allows them to determine the appropriate resources to be used for an external audit. Viewed collectively, it is expected that audit quality is enhanced.

## 10.2.3 Sharing of Sensitive Information about Managers with ACMs

The study observes that EAs' trust in ACMs' integrity reduces their anxiety to share sensitive information about managers with ACMs and encourages them to consider the information provided by ACMs on managers. The sensitive information may include the comments on managers and any difficulties caused by managers that undermine audit process, efficiency, effectiveness and thereby, audit quality. The findings have implications for EAs as well. If they trust ACMs, they may become willing to report any difficulties caused by managers to ACMs, so that ACMs can take immediate actions to enable them to effectively perform an external audit. The findings also have implications for ACMs. If EAs trust them, they will be willing to provide their comments on managers. Using these comments, ACMs can appoint high quality management, so that tones from the top may be improved.

The findings of this study are consistent with the results from previous studies in that trust enables partners to exchange confidential and sensitive information. For instance, Bryan, Sinkovics and Kim (2010) examined the effects of innovation orientation and technology uncertainty on the levels of relationship learning and market performance. According to their observation, trust reduced the tension of keeping confidential information in the relationship between buyers and sellers, so as to facilitate learning. In their study of investigating how characteristics of partnership, communication behaviour and conflict resolution techniques affected the success of partnership between dealers and their manufacturers, Mohr and Spekman (1994) noted that trust led to better performance by enabling buyers and sellers to exchange confidential information. The findings in this study are in consonance with the results reported in Gundlach and Cannon (2010), who examined the effects of trust and formal verification on supplier performance. In particular, they showed that formal evaluation of suppliers did not significantly improve supplier performance, but trust improved supplier performance.

The findings in this study are in line with the report of Bogt and Tillema (2016), who found that trust between government officers and professionals in performance art enhanced the openness of discussion and information sharing, thereby improving financial performance of theatre. In their study of the relationships between inter-organisational trust and performance in the Czech Republic, Fiala, Rrokop and Zivelova (2012) observed that performance between suppliers and customers improved because a high level of trust may reduce opportunistic behaviour of partners and encourage them to share information.

In the context of an external audit, these findings imply that EAs' trust encourages them to share sensitive information about managers with ACMs. Chartered Professional Accountants of Canada 2014) and HKICPA (2015) concurred that they should share specifically information with ACMs, reporting any difficulties caused by managers to ACMs, such as significant delays caused by managers in conducting particular tasks, no access to certain personnel in the companies, managers' unwillingness to provide important information, areas where the audit lags behind schedule and the reasons for the same, unanticipated and extensive EAs' effort to obtain sufficient appropriate audit evidence.

Chartered Professional Accountants of Canada (2014) and HKICPA (2015) suggested that if management does not cooperate with EAs, they should initiate discussions with ACMs, so that ACMs can have sufficient time to collect sufficient evidence by requiring managers to eliminate inefficiencies and respond to EAs immediately. They should ensure that they can gain sufficient support from ACMs in lending credence to their opinions on accounting matters which increase the tension between them and their managers (Chartered Professional Accountants of Canada, 2014). It was also observed that EAs should report to ACMs when they are impelled to rely on particular staff members by managers for information to conduct an external audit, or if managers overly control the relationship with EAs. They should discuss with ACMs whether the managers are too defensive about issues raised by them, or about the request for information to support managers' discernments and judgments. They also should talk to ACMs in case managers are unwilling to document and support various accounting estimates or to meet their requests for an assessment of a company' ability to continue as an ongoing concern (HKICPA, 2015; Chartered Professional Accountants of Canada, 2014).

Another important issue which EAs should make it a point to communicate with ACMs is that managers refuse to correct material misstatements of financial statements and inappropriately apply accounting methods for unusual transactions, emergent areas or inappropriately prepares sensitive accounting estimates (HKICPA, 2015; Chartered Professional Accountants of Canada, 2014; PCAOB, 2012). They should also undertake discussions if managers consult with other accountants on auditing and accounting matters. They should express their views about significant matters that are the subject of consultation (HKICPA, 2015; PCAOB, 2012). This assumes importance for audit quality. For instance, if they do trust ACMs, they may report inappropriate application of accounting methods on the part of managers. ACMs may also require managers to adjust the accounting methods, to enhance both audit effectiveness and quality.

To conclude, if EAs choose to repose their trust on ACMs, they may share information about managers with ACMs, including their comments on managers and difficulties caused by them. This may render the audit process smooth, thus improving audit quality.

## **10.2.4 Discussions about Findings and Recommendations**

According to this study, EAs' trust in ACMs' ability encourages them to believe that ACMs take the recommendations seriously and are able to require the managers to implement the recommendations. It also encourages them to devote their time and efforts to engaging in more informal discussions with ACMs and asking more specific questions. They may become open and candid to provide more recommendations and report their findings. In addition, they may be willing to provide more in-depth analysis and value-adding recommendations and spend more time exploring recommendation options as well as discussing rationales behind their recommendations. These findings have implications for audit processes and effectiveness since it indicates that effective communication about recommendations and findings allows ACMs to identify the problems of accounting processes and require the management to remedy them.

The findings of previous studies in other fields support the view that trust encourages actors to cooperate. In essence, partners are willing to contribute more resources to a relationship because of the underlying belief that they can achieve common goals. For example, in their study of describing specific mechanisms that influence interaction patterns and organizational processes m McEvily, Perrone and Zaheer (2003) found that trust encourages actors to contribute their resources in joint activities, which leads to better performance. Robson, Katsikeas and Bello (2008) suggested in their study of the role of social and bureaucratic factors in cooperative processes in international alliance that trust improves performance by improving mobilisation of mechanisms, which enable partners to transfer their resources in an alliance. Specifically, they noted that the smaller the alliance size, the stronger the positive relationships between trust and performance.

Liao and Shi (2015) noted in their study of the effects of inter-firm trust and dependence on ebusiness integration and operational performance in supply chain management in China that a high level of trust is known to enhance the operational performance of partners in supply chain management by enabling partners to have cooperative mindsets in business operations. In turn, this leads to optimal resource sharing. In particular, they observed that if behavioural uncertainty is high, trust assumes even greater importance in improving supplier performance.

The findings in this study is consistent with the results of Yan and Gray (1994), who explored the effects of bargaining power on management control in joint ventures between US and Chinese firms. Particularly, they observed that mutual trust is an important factor which moderates the effects of management control on performance. When management control is found to be dominant in one partner, trust assumes more importance for enhancing their cooperation. Meanwhile, in their study of exploring the connection between trust and interactions over time in a collaborative project in education industry, Oortmerssen, Woerkum and Aarts (2014) reported similar results. In particular, they noted that trust improved interactions and vice versa. They also observed that trust enhances openness for discussions and responsiveness to questions. Similarly, Carson et al. (2003), in their study of exploring the relationships between trust-based governance and performance in outsourced research and development engagements, showed that trust-based governance would enhance task performance by improving overall cooperation and coordination. More specifically, they noted that positive relationships were moderated by clients' task-related and teachability of task.

The findings in this study are also consistent with the results of Bien. Ben and Wang (2014), who investigated the relationships between trust and firm performance in the realm of research and development cooperation. They suggested that trust enhances cooperative performance by providing opportunities for cooperation, enhancing flexibility, reducing coordination costs and facilitating knowledge transfer. They also found that the usage of formal contract and informal exchange increases the level of trust, resulting in better cooperative performance. In their study of investigating the role of trust in cooperative agreements in research and development. Monroro-Sanchez, Mora-Valentin and Guerras-Martin (2010) argued that trust enhances cooperation, thus improving performance in research and development. They observed that both initial and ongoing trust enhances cooperation and performance. Analogously, Silva, Bradley and Sousa (2012) noted in their study of investigating the antecedents of trust and examining the trustperformance relationship in international alliance that trust improves performance by enhancing the level of satisfaction between actors in the context of international business activities. Interestingly, they reported that the more similar the partners are, the stronger the positive linkage between trust and performance is.

These findings in the context of an external audit suggest that if EAs trust ACMs, they may endeavour to spend additional time on discussions relating to findings and recommendations with ACMs. For example, if modified opinions are issued, they need to discuss the underlying reasons for this development. They may expect that managers have serious disagreements with their opinions and judgments about accounting estimates (HKICPA, 2015; Chartered Professional Accountants of Canada, 2014; PCAOB, 2012). If they trust ACMs, they may be willing to spend more time discussing the above issues. Consequently, ACMs may develop a better understanding of the underlying rationale behind their judgments about accounting estimates. Since an external audit becomes more effective, audit quality is enhanced.

EAs' trust also encourages them to endeavour to discuss the changes necessitated in an external audit with ACMs. To illustrate, ACMs may inform them about any significant transactions or changes in the business which may affect the progress of audits and in effect, audit report (Accounting and Corporate Regulatory Authority, 2010; HKICPA, 2015). Chartered Professional Accountants of Canada (2014) stated that if necessary, ACMs may request them to perform additional audit procedures beyond the requirements of audit standards (HKICPA, 2015; Chartered Professional Accountants of Canada, 2014). If they trust ACMs, they may be willing to discuss the impact of significant transactions or changes unfolding in businesses. Further, they may become more flexible in performing additional audit procedures beyond the requirements of audit standards because they are willing to contribute more resources (their time and effort) to an external audit. Since more resources can be appropriately used in an external audit, audit quality is enhanced.

Another example is that after performing substantive test on these transactions, they may find that there are material misstatements in some transactions, so they may need to discuss the changes of scope of the audit and the impact of these changes with ACMs (HKICPA, 2015; Chartered Professional Accountants of Canada, 2014). If they do trust ACMs, they may discuss the need of changes of audit scope with ACMs. Since the scope of audit can be adjusted in accordance with the level of risk and emerging issues of a company, audit quality is enhanced.

In their discussions about findings and recommendations, they may share their personal experience with ACMs to facilitate the benchmarking to best practices (Accounting and Corporate Regulatory Authority, 2010). If they trust ACMs, they may provide recommendations using their experience acquired from the audits of other companies to ACMs. Accordingly, ACMs can use these recommendations to improve internal audit function of a company.

To conclude, EAs' trust encourages them to discuss such issues with ACMs as the need of changes of the scope of an external audit, changes of business circumstances that are not anticipated in audit plan, sufficiency of audit procedures as well as appropriateness of the audit report's conclusion. Further, they may have in-depth discussions about the recommendations as well. Since an external audit is adjusted in connection with unanticipated events and recommendations are considered thoroughly, audit quality is enhanced.

### **10.2.5 Selection of Audit Approaches**

According to this study, if EAs trust ACMs, they tend to use control-based approaches because they believe that ACMs may hold managers accountable, perceived audit risk is less and internal controls can be depended upon. If the level of trust is low, they may be less certain about controls in place and perceive that ACMs' care in overseeing financial reporting is lacking. These findings have significant implications for the audit process, effectiveness and efficiency.

Firstly, EAs cannot perform substantive tests on all transactions of a company because of the sheer size of volume (Blokdijk, Drieenhuizen and Stein, 2003), but they can test internal controls that the transactions should go through. The usage of control-based tests leads to speedier audit, which could reduce the resources required in an external audit. Apart from optimal use of scarce audit resources, both substantive tests and control-based tests can also be used for high risk areas. For instance, if they find that internal controls are strong for revenue cycle, they may reduce substantive tests on the amount of revenues. As a result, they may be able to use the saved time to perform both control-based and substantive tests on purchasing equipment. By doing so, audit resources can be directed to appropriate areas, so that audit quality may be enhanced.

Secondly, the evidence obtained from substantive and control-based tests can be corroborated, so that the findings may be more reliable. To illustrate, they can test the approval process about which transactions of revenues should go through. They can then substantively test the amount of revenues. If the results of substantive tests reveal that the amount of revenues is correct and the results of control-based tests show that the revenues have been appropriately approved, EAs will have strong evidence to back the claim that revenues are not misstated.

The results of prior studies in other fields demonstrated that trust reduces opportunism; therefore, actors perceive that risk is low. For instance, in their study of trust and perceived risk in the context of strategic alliances, Das and Teng (2001) suggested that goodwill trust reduces perceived risk because it reinforces the reputation and attitude of care about partners' benefits in alliances. Therefore, partners feel more assured that they may cooperate in good faith, and not behave opportunistically. Hence, the likelihood that partners act opportunistically is reduced. Further, they suggested that competence trust reduces perceived risk because high competence of partners suggests a high probability of getting things accomplished successfully.

In a study which explored the role of trust in the long-term commitment between partners in strategic alliances with firms belonging to different cultures, Fadol and Sandhu (2013) found that the high level of trust between ADGAS partners did not lead to any opportunistic behaviour from ADGAS partners. Trust and cooperation helped the partners quickly commit more resources as needed and implement their joint project, a decision that accelerated decision-making.

Similarly, in their study that tested the Das and Teng's conceptual framework of trust, risk and control for pharmaceutical buyer-supplier relationships in Turkey, Sengun and Nazli (2007) reported similar results. The findings were similar to the results found in the study conducted by Ren, Gray and Kim (2009), who suggested that trust serves the purpose of social control mechanisms in order to reduce opportunism in the context of international joint venture. In their study of evaluating the relationship between trust and risk in the context of partnerships of education

services, Walker (2007) noted that goodwill trust and competence trust reduce perceived risk by illuminating the intention not to behave opportunistically. As a result, the risk that the partners do not cooperate is reduced.

Competence trust gives confidence that partners have the ability to achieve tasks successfully, implying that perceived risk is low. In their study of examining the effects of trust and perceived risk on exchange performance, Delbufalo (2015) observed that trust reduces perceived risk by encouraging partners to expect that they are not taken advantage of. As a result, cooperation is enhanced and exchange performance is improved. In particular, they noted that high perceived risk reduces the effectiveness of governance structure by increasing the cost of monitoring. Consequently, partners need to spend excessive resources monitoring one another (Nooteboom, 1996). In a study investigating the effects of balance of bargaining power on the balance of management control in joint ventures between US and Chinese firms, Yan and Gray (1994) concluded that mutual trust was an important factor which moderated the effects of management control on performance. When management control was found to be dominant in one partner, trust was deemed important for enhancing their cooperation.

The findings in this study are in line with the results obtained by Swiatowiec-Szczepanska (2012), who investigated appropriate risk management mechanisms under varying characteristics of relationships. They reported similar results, but observed that trust did not necessarily guarantee the reduction of perceived risk if it was unsupported by activities of one another, or if rela-

tional norms were unilateral, since partners will fear that their partners will take advantage of their trust to engage in opportunistic behaviours. In their study about the linkage between control problems, trust and formal controls in the relationship between a supplier of railway safety systems and government department responsible for maintaining the Dutch rail infrastructure system, Dekker (2004) observed that trust enables partners to perceive that risk is low. As a result, control problems are perceived to be reduced. Additionally, the study demonstrated that formal control provided partners with the direction of alliances to achieve common goals. Capability trust and goodwill trust strengthened the effects of formal controls on enhancing the coordination of activities and reducing opportunistic behaviours. Hence, perceived risk is low.

In a study relating to the effects of trust on positive outcomes in marketing channels, Geyskens et al. (1996) reported that trust improves satisfaction and long-term orientation because when partners trust one another, they tend to feel secure by the implicit beliefs that actions of a partner will bring in positive outcomes or at least prevent a negative outcome. In the long run, partners will commit themselves to the relationships due to the establishment of trust. Specifically, they noted that environmental uncertainty and the use of coercive power were negatively associated with the levels of trust, but pointed out that dependence and communication was positively associated with trust, thereby improving satisfaction and long-term orientation. In their study about the effects of trust on risk and the moderating effects of interpersonal relationships on the linkage between trust and risk in marketing channels, Liu et al. (2008) found similar results. Liu, Wang and Yan (2011), in their study relating to the correlations among control, trust and risk in supply

chain in China, reported that trust reduces perceived risk by showing cooperation intention of supply chain members. Moreover, partners can reduce their concerns about the problems in cooperation, thus lowering perceived risk. More specifically, they reported that behaviour control and performance control helped reduce perceived risk.

In order to identify the antecedents of risk to manage the overall satisfaction of outsourcing experience, Willenweber, Jahner and Krcmar (2008) conducted a study showing that trust reduces financial risk, resulting in high satisfaction. If the level of trust is high, actions leading to unexpected service cost due to opportunistic behaviours are unlikely to occur: this implies that financial risk is reduced. In their study about the linkage between the effects of governance and trust on risk perceived by partners in alliances of microelectronics assembly industry, Nooteboom, Gerger and Noorderhaven (1997) showed that trust reduces perceived risk in terms of probability of loss as opposed to the size of loss because trust reduces the intention and motives of partners of engaging in opportunism. In a study investigating the roles of trust on commitment in logistics alliances, Moore (2006) found that buyers' trust reduces perceived risk, leading to enhanced relationship commitment because a buyer thinks that their partners will fulfil their future obligations. In their study which examined the effects of governance mechanisms in forms of formal contracts, relational norms and trust on the performance of exploration, exploitation joint research and development, Arranz and Arroyabe (2011) observed that trust curbs the opportunism of partners through shared norms and values, so that risk is perceived to be low. Partners will be able to

formulate their reciprocal expectations, leading to improved performance between partners in exploration projects.

These findings have significant implications in the context of an external audit. If EAs do not trust ACMs, they may doubt ACMs' behaviour and internal controls due to the perception that audit risk is high. By only relying on substantive tests rather than control-based tests, they may not be able to use control-based tests to obtain evidence that has been corroborated with evidence obtained from substantive tests, rendering them less reliable. Additionally, if they only depend upon substantive tests, they may be able to use less time to cover other high risk areas, thereby compromising audit quality.

### 10.3 Discussions about Findings of Responses to Closed-Ended Questions

The findings of closed-ended questions are consistent with the results of open-ended questions and previous studies in that EAs' trust encourages them to interact with ACMs and perceive that the quality of interactions with ACMs is high. Similarly, the findings of independent t-tests support the notion that their trust in ACMs encourages them to develop the perception that trust increases interactions with ACMs. As per the findings of regression analysis, their trust in ACMs' integrity and goodwill encourages them to perceive that the quality of interactions with ACMs is improved. These findings imply that if they place their trust in ACMs' goodwill and integrity, the perceptions of the quality of their interactions with ACMs will also improve.

# **10.4. Chapter Summary**

This chapter compares the findings of the questionnaire survey study undertaken in this research to prior studies and explains their implications. The researcher has elucidated how EAs' trust improves their interactions with ACM, which, in turn, enhances the efficiency, effectiveness and quality of audit process. ACMs are required to display high levels of competence, integrity and goodwill so that EAs can trust them. By doing so, they may perceive the fact that the quality of interactions with ACMs is enhanced. Consequently, effective interactions will occur, leading to high audit quality.

# CHAPTER 11 SYNTHESIS OF ARCHIVAL MODELLING AND QUESTIONNAIRE STUDIES

## **11.1 Introduction**

This chapter begins by discussing the findings and implications of the archival modelling and questionnaire survey studies. Thereafter, the discussion focuses on how the findings of both studies are integrated with each other.

## 11.2 Findings and Implications of the Archival Modelling Study

The archival modelling study provides evidence that ACMs' financial expertise, AC size, tenure and age are important determinants of audit quality. Readers of accounting reports can use the data on these characteristics as indicators of audit quality. For this reason, Hong Kong regulatory authorities may mandate that a Hong Kong listed company must have certain number of directors with financial expertise on the AC. Additionally, they may mandate that ACMs' age must not exceed a maximum level so that stakeholders' interests can be protected. However, it does not support to establish maximum years of ACMs' service period because long tenured ACMs may help enhance audit quality. Mandatory rotation of ACMs may reduce audit quality. This study fails to find evidence that AC independence, diligence and directorships relate to audit quality. The archival modelling study documents evidence that an effective AC helps enhance audit quality after the financial crisis. The findings provide practical implications for corporations' needs to satisfy the needs of stakeholders and attract potential investors. Measuring the impact of effective AC characteristics allows decision makers to evaluate the role of these monitoring systems in enhancing stakeholders' perception about the quality of financial information. If stakeholders are able to obtain reliable information about corporate performance, their financial decisions can then become more accurate and effective. This study reveals findings that may enable stakeholders to improve their decision-making. Measuring different AC characteristics enables stakeholders to be mindful of ACMs' effectiveness in monitoring audit quality in order to reduce earnings management as well as to evaluate the reliability of financial information.

Hong Kong's corporate governance authorities can use this study as empirical support for developing their regulations and making further recommendations relating to corporate governance. Stock market authorities can also use this study's results to evaluate the current disclosure requirements of corporate governance practices in improving audit quality. New corporate governance practices and revisions of existing corporate codes after the financial crisis in 2008 should be based on evidence provided by empirical studies, such as the evidence provided by this research.

## 11.3 Findings and Implication of the Questionnaire Survey Study

The questionnaire survey study finds that EAs trust ACMs because ACMs display integrity, competence and goodwill. Their trust also encourages them to seek more useful information to perform risk assessment, determine the scope of audit and material thresholds and share sensitive information with ACMs. Armed with high levels of trust, EAs may be able to determine more appropriate audit approaches. For instance, if they have a high level of trust in ACMs, they should leverage a control-based audit approach, so that resources can be directed to high risk areas. If they have low levels of trust in ACMs, they may choose to use more substantive approaches. Since resources can be used in appropriate areas, the effectiveness and efficiency of an audit is likely to increase, leading to improved audit quality.

The questionnaire survey study also provides insights to regulators. Regulators may require ACMs to have and display high levels of competence, goodwill and integrity in order to encourage EAs to trust them. For example, regulators may require them to have sophisticated financial, accounting and industry expertise. This may increase EAs' trust in their competence. Regulators may also require them to keep EAs' comments on managers confidential. This, in turn, may increase EAs' trust in their integrity. Regulators may strengthen the independence requirements of ACMs, requiring them to diligently cooperate with EAs and oversee financial reports. For instance, regulators can require them to hold certain numbers of meetings with EAs and mandate the content of discussions taking place between them in each meeting. The regulators may also

specify and strengthen the information that should be communicated between them. By doing so, EAs may be more willing to trust their goodwill, thus enhancing the perception relating to the quality of interactions. As a result, the reliability of financial statements can be improved. This allows stakeholders to make better decisions using high quality financial statements.

### 11.4 Synthesis of the Findings of Both Studies

Sections 11.2 and 11.3 discussed the findings as well as implications of the archival modelling and quanlitative studies. This section discusses how these findings are integrated.

A high level of EAs' trust in ACMs is expected to strengthen the positive association between AC characteristics and audit quality because EAs' trust in them improves their interactions, which are important for enhancing the audit processes. As demonstrated in the study conducted by Sulaiman (2017) and mentioned in Section 3.5, audit quality may be influenced by the quality of their relationships and interactions. She agreed that interactions often occur between ACMs and EAs outside the formal meetings to discuss sensitive and important audit issues, which may have an impact on audit quality. This result is supported by the findings of the study conducted by Gendron (2004), who showed that EAs, ACMs and managers had interactions to discuss the coherence of financial reports and ACMs assess EAs' competence on the basis of whether their audit plan reflected their understanding of the impacts on audit risks. Gendron (2004) suggested that the one area where ACMs have interactions with EAs is to assess EAs' performance and in-

dependence. ACMs have private meetings with EAs to assess the quality as well as ability of managers. They discuss whether they have unimpaired access to information and experienced any difficulties during the course of their audit.

Cohen et al. (2007) reviewed prior literature and proposed that EAs should discuss factors that might impel managers to make aggressive accounting choices, such as analyst forecast data and understand how audit fees are determined with explicit consideration of achieving quality services. This information should also be disclosed in the engagement letter. They should evaluate each of the components of the Management's Discussion and Analysis (MD&A) as well as the convergence of the MD&A with external information. Beattie, Fearnley and Hines (2013) conducted semi-structured questionnaire surveys with CFOs, AC chairs and audit partners to explore the factors that may influence audit quality during the post-SOX period in the UK. They noted that EAs' communication with ACMs on key issues associated with audit and ethical standards was the most important factor which influenced audit quality.

In their interviews, Salleh and Stewart (2012) found that EAs faced difficulties in handling matters highly subjective in nature and as a result, had disputes with managers. If these issues are material, they will be submitted to the AC for resolving them. The participants agreed that when EAs submit their audit plan at the beginning of a financial year, they raise concerns about potential audit issues. The AC is alerted at an early stage about issues that may potentially cause disagreements between managers and them. At the reporting stage, all audit findings and proposed audit adjustments are discussed with the AC. They also observed that the AC's authority of mediating in disputes is strengthened by the AC's expertise because it allows them to make systematic judgments about accounting disputes between EAs and managers.

Based on these studies, the researcher can understand that although a large AC has independent and diligent ACMs who are financial experts, important issues cannot be solved such as audit plan, material areas subject to subjective judgments, disagreements between EAs and managers, if they do not have effective interactions with ACMs. Hence, the quality of an external audit may be low. The questionnaire survey study demonstrates that trust is an important factor that encourages EAs and ACMs to have more interactions. If ACMs have effective characteristics and EAs may trust them, they are not only able to effectively monitor the quality of the audit work, but also discuss with EAs how to enhance the effectiveness and efficiency of the audit process. Thus, it is expected that audit quality is further enhanced. For instance, if ACMs are financial experts and EAs trust them to be independent, EAs may be willing to discuss the likelihood that managers engage in aggressive earnings management. Therefore, ACMs may allow EAs to have a wider scope of the audit, so that the effectiveness, efficiency and quality of audit processes may be enhanced.

# 11.5 Conclusion

This chapter shows that ACMs' financial expertise, AC size, tenure and age are important determinants of audit quality. EAs tend to trust ACMs because they display integrity, competence and goodwill. EAs' trust in them may improve their interactions to discuss important issues, which, in turn, may enhance audit quality. In totality, EAs' trust in ACMs may moderate the positive associations between ACMs' characteristics and audit quality. The next chapter provides the summary and conclusion of the entire thesis.

# CHAPTER 12 SUMMARY AND CONCLUSION

## **12.1 Introduction**

This chapter summarises this study and its major findings. It will be organised as follows:

- 1. Restatement of the research questions
- 2. Description of the research methods undertaken to answer the research questions.
- 3. Summary of the research results
- 4. Limitation of this research
- 5. Avenues for further research

### **12.2 Restatement of the Research Questions**

Opportunistic earnings management practice leads to misleading reported earnings that do not truly reflect a company's performance. In turn, this may reduce the usefulness of financial statements for stakeholders' economic decisions. When managers' opportunistic behaviour is constrained by monitoring systems, reported earnings may become more reliable. One of the control mechanisms found effective in earnings quality is to enhance audit quality via efficacious AC characteristics and their interactions with ACMs so as to constrain the opportunistic earnings engaged by managers.

The aim of this study is to investigate the effects of AC characteristics and EAs' trust in ACMs on audit quality in Hong Kong. Accordingly, four research questions were asked:

1) What are the impacts of AC characteristics on audit quality in Hong Kong?

2) What factors influence EAs' trust in ACMs in Hong Kong?

3) Does EAs' trust have positive effects on their interactions with ACMs in Hong Kong?

## 12.3 Summary of Research Methodology

This study used the archival modelling and questionnaire survey studies. The archival modelling study enabled the researcher to collect secondary data to examine the hypotheses in regard to the relationships between AC characteristics and audit quality using the quantitative research method The questionnaire survey study enabled the researcher to explore the effects of EAs' trust in ACMs on audit quality in the context of Hong Kong coporate governance using both the quantitative rative and qualitative methods.

Using agency theory, this study investigates the effects of corporate governance and external audit systems on restricting earnings management. Part One of this research is an archival modelling study that examines the impacts of effective AC characteristics on audit quality. A review of relevant literatures identifies seven AC characteristics: AC size, independence, diligence, competence, directorships, tenure and age. Consistent with prior research (Shankaraiah and Amiri, 2017;

<sup>4)</sup> How does EAs' trust in ACMs impact their interactions and audit quality in Hong Kong?

Yasser and Al Mamun, 2016; Ayemere and Elijah, 2015; Nelson and Devi, 2013; Baxter and Cotter, 2009), this study incorporated discretionary accruals estimated by modified Jones model to proxy for audit quality.

Eight models were constructed and seven hypotheses were tested. Models 1 and 2 denote the main analysis of the relationships between AC characteristics and audit quality measured in terms of absolute value of discretionary accruals. As additional analysis, Models 3 and 4 use the indicator whether the absolute value of discretionary accruals is higher than the sample median. Models 3 to 4 helped ascertain whether the results are sensitive to alternative statistical methods. Similarly, models 5 and 6 use the log value of audit fees as a proxy for audit quality; on the other hand, models 7 and 8 use the choice of EAs as a proxy for audit quality. Models 5 to 8 serve as robustness checks to determine alternative measures of audit quality.

These models were tested using a sample of firms contained in Hong Kong Hang Seng Composite Index. Firms belonging to the financial industry were excluded due to their different accrual choices and valuation processes. The study covers the period from 2010 to 2015. Panel data regression was used to investigate whether these AC characteristics significantly improve audit quality.

Part Two of this research comprises of a questionnaire survey study that explores the effects of EAs' trust in ACMs based on their interactions and in effect, audit quality. Semi-structured ques-

tionnaires were sent to EAs in order to investigate their levels of trust in ACMs and effectiveness of their interactions and help me understand the impacts on audit quality. OLS with robust standard errors and independent t-test were used for analysing the responses to closed-ended questions. Similarly, thematic analysis was used to analyse open-ended questions.

The archival modelling study demonstrates what characteristics are important for ACMs to perform their oversight role on audit quality. The questionnary survey enables the researcher to explore EAs' trust in ACMs and their interactions. Particularly, the data of their trust and interactions with ACMs cannot be collected from secondary data. This mixed method allows the researcher to triangulate the findings obtained from the arichival modelling and questionnaire survey so that this will enable the researcher to obtain better understandings of the critical oversight role of the ACMs on audit quality as shown in Chapter 11.

## **12.4 Summary of the Research Results**

This section summarises the findings of the archival modelling and questionnaire survey studies.

### 12.4.1 Summary of Findings of the Archival Modelling Study

Seven hypotheses and the key findings of their tests were summarised in Tables 30 and 35. Seven hypotheses are re-stated as follows: H1: There is no relationship between audit quality and the size of an AC.

H2: There is a negative relationship between audit quality and AC independence.

H3: There is a negative relationship between the diligence of an audit committee and audit quality.

H4: There is a negative relationship between AC financial expertise and audit quality.

H5: There is no relationship between AC directorships and audit quality.

H6: There is no relationship between average AC tenure and audit quality.

H7: There is a negative relationship between AC age and audit quality.

The overall results suggest that effective AC characteristics are important for the purpose of enhancing audit quality in Hong Kong.

Consistent with hypothesis 1, the result shows that AC size positively relates to audit quality in Hong Kong in Models 1 and 2. The result indicates that a larger AC may have more resources at its disposal, such as expertise, experience and manpower, to perform their oversight role in order to improve audit quality. Inconsistent with hypothesis 2, the coefficients of AC independence are only significant in Model 4 and insignificant in Models 1 to 3. Therefore, it does not support the view that AC independence enables them to monitor managers without any intervention. A possible explanation of this result is that HKEx classification of independence may not truly reflect AC independence. For example, friendships between managers and ACMs are not required to be reported in an annual report. Consistent with hypothesis 3, the findings show that AC expertise positively relates to audit quality in Models 1 to 2. It is indicated that AC financial expertise is important for enhancing audit quality in Hong Kong because accounting or finance experts have a better understanding of technical internal controls and auditing procedures. Inconsistent with hypothesis 4, the result does not show that AC diligence relates to audit quality in Models 1 to 4. This can be explained by the fact that the number of ACMs' meetings does not show the quality, length or issues of the discussion. Particularly, this does not show the interactions between ACMs and EAs. Thereby, the number of meetings may not fully capture ACMs' diligence, so this does not relate to audit quality.

Inconsistent with hypothesis 5, the result demonstrates that AC directorship does not significantly relate to audit quality in Models 1 to 4. This can be possibly attributed to the nature of directorships. If they serve as directors of other companies within the same industry, the experience may enable them to improve their oversight role. However, if they serve as directors of companies in other industries, this experience may not be applied to their oversight role of the sampled companies. This indicates that there is no significant relationship. Also, the number of directorships may not adequately capture ACMs' busyness. For example, a director who serves on five small listed companies may not be as busy as the one who serves on three giant large listed companies. Consistent with hypothesis 6, the result shows that this study finds a significant relationship between average AC tenure and discretionary accruals in Models 1. The results of this study provides evidence that ACMs may acquire more knowledge and experience of monitoring financial reporting and audit process in a company over a period of time (Fiedier, 1970). These findings do not support the viewpoint that a long-tenured ACM may become familiar with managers, so their oversight role on managers may be impaired (Vineeta and Errol, 2012) in Hong Kong. Surprisingly, the result shows that average AC age positively related to discretionary accruals in Models 2 and 4. This study provides evidence that older ACMs may contribute to lower audit quality because they have less energy to monitor audit and financial reporting process and cannot keep a breast of the changing enviroment of a company or technology.

## 12.4.2 Summary of Findings of the Questionnaire Survey Study

The findings are consistent with the four propositions stated in Chapter 7 as follows:

P1: EAs trust ACMs if they have and display competence.

P2: EAs trust ACMs if they have and display integrity.

P3: EAs trust ACMs if they have and display goodwill

P4: EAs' trust in ACMs has positive effects on the interactions with ACMs and in effect, audit quality.

An analysis of responses to open-ended questions suggests that it is important for ACMs to display high levels of integrity, competence and goodwill, so that EAs are more willing to interact with them. Furthermore, trust plays an important role in their relationships with ACMs by improving the quality of discussion and information sharing between them. The findings have implications for audit process and effectiveness since EAs could receive more information from ACMs, thus enhancing their understanding of clients' audit risk.

Moreover, their trust in ACMs reduces their anxiety to share sensitive information about managers with ACMs and encourages them to consider the information provided by ACMs on management. Their trust in ACMs' ability encourages them to believe that ACMs take the recommendations seriously and are able to mandate managers to implement them. Thus, they will endeavour to discuss their recommendations and findings. It encourages them to devote their time and efforts to engaging in more informal discussions with ACMs and asking more specific questions. They may become open and candid for providing more recommendations and reporting their findings. They may also be willing to provide more in-depth analysis and value-adding recommendations, whilst also spending more time exploring recommendation options and discussing rationales behind their recommendations. The findings have implications for audit processes and effectiveness since it is indicated that effective communication about recommendation and findings enables ACMs to identify the problems of accounting processes and require managers to remedy them. If they trust ACMs, they may tend to use control-based approaches because they believe that ACMs may hold managers accountable, perceived audit risk is less and internal controls can be relied upon. If the level of trust is low, they may be less certain about the controls in place and perceive that ACMs' care in overseeing financial reporting is lacking. In contrast, their trust encourages them to focus their resources on high risk areas, so as to make the process of audit more efficient and effective.

The findings and the propositions are consistent with the social interdependence theory. Since EAs and ACMs have common goals to achieve high audit quality to protect shareholders, so they depend on one another. Therefore, they may develop trust in ACMs if ACMs can smooth EAs' work. In order to smooth their work, ACMs should display high levels of competence, integrity and goodwill. If they trust ACMs, they will be willing to share information and suggest recommendations beyond the minimum requirements suggested by the audit standards, have better cooperation and become more diligent in external audits, as predicted by social interdependence theory.

### 12.5 Implication and Significance of This Research

Implication of the findings has been discussed in Chapter 11. This section focuses on the discussions on the implication and significance to the users of this research. This research shows that ACMs' size, financial expertise and tenure are positively associated with audit quality, but their age negatively relates to it. Therefore, the financial statement users can use these variables to assess the level of audit quality of a listed company to make their economic decisions. For example, investors can assess these variables to determine the level of audit quality of a listed company they want to invest in. If a company has a small and old AC with low levels of financial expertise as well as short tenure, the investors need to pay particular attention to its audit quality because it may be easier for managers to manipulate earnings, so the financial information they rely on to make investment decision may not be reliable, resulting in making inappropriate decisions. The regulators should mandate certain AC characteristics. For instance, they may legally require an AC to have a minimum number of members and financial experts in a year and a maximum age requirement for ACMs. Therefore, it is expected that audit quality of Hong Kong listed companies can be enhanced to protect the interests of financial statement users so that the risk of financial crisis can be mitigated.

This research also demonstrated that EAs may trust ACMs if they display competence, integrity and goodwill. This provides evidence to current Hong Kong ACMs that if they want their EAs to trust them, they should display competene, integrity and goodwill. This research elucidated how EAs' trust improves their interactions with ACM, which, in turn, enhances the efficiency, effectiveness and quality of audit process. It provides additional support for the views that regulators should legally require the AC to have the minimum levels of independence and financial expertise. Therefore, these regulations may enhance their competence, integrity and goodwill, so ACMs may be more willing to trust and interact with EAs. This research implies that a large and young AC with high levels of financial expertise may improve audit quality, but if they cannot establish trust with EAs, audit quality may still be low because they may not have effective interactions with EAs. On the contrary, although EAs trust ACMs, if the AC does not have the desired characteristics found in this research, audit quality may still be low.

If regulators require an AC to have a certain number of members and expertise, and impose maximum age rerquirement, not only does it improve the AC characteristics, but also encourage EAs to trust ACMs because they are expected to display higher levels of competence, integrity and goodwill so that the perception of the quality of interactions may be enhanced. Therefore, the regulations on meetings, financial experts and age are expected to have twofold positive effects on audit quality.

### 12.6 Potential Limitations of the Research

Although this thesis was theoretically conducted on a systematic basis under the supervision of qualified and specialised supervisors, there it is not impervious to potential limitations, and the reader should be aware of the same when interpreting the research findings. These research limitations have been divided into two sections. The first section pertains to the limitations of the archival modelling study. The second section is concerned with the limitations of the questionnaire survey study.

## 12.6.1 Potential Limitations of the Archival Modelling Study

The first limitation relates to the validity of statistical conclusions and the probability that the statistical results are representative of the actual relationship with the data set. In this study, the sample used is limited to the companies contained in the Hong Kong Hang Seng Composite Index. This may lead to a size bias. However, this bias is likely to reduce survivorship bias during the course of the study period because larger firms are less likely to be delisted than their smaller counterparts.

The second limitation relates to the selection of the study sample. The sampled firms are selected from the index, as opposed to being randomly selected from the listed companies. This may introduce an inherent bias and possible inaccurate associations arising from the sample design. However, since the formation and closure of an AC is voluntary, it is more likely that companies contained in the index may accurately disclose the information of an AC for this study. For this reason, it is difficult for the study concerning Hong Kong to select firms randomly.

This study used data from Hong Kong. Care should be taken in generalising the results to the markets of other countries that have different regulations, practices, and economic features and whose capital market may exhibit different characteristics. However, the similarity in the results of this study and the findings of research in other countries may indicate a high degree of gener-

alisability. Even in Hong Kong, the generalisability of results to all listed companies may be reduced because financial companies were excluded from the sample.

The use of discretionary accruals as audit quality in this study may also have some limitations. Although the use can be justified theoretically, it may not be accurately measured. However, this limitation has been minimised through unambiguous operational definitions of the measures in Chapter 3.

In terms of the dependent variable (discretionary accruals), the literature indicates a high level of measurement errors in the accrual models that are commonly used as a proxy for audit quality. Another limitation is that audit quality can be measured in various ways, such as financial restatement, audit fees and abnormal market returns. Currently, no clear method exists for the purpose of measuring audit quality.

A further limitation of this study is that there may be other factors which influence audit quality in addition to corporate governance. While additional control variables were identified for inclusion in tests to control further potential influencers of audit quality, it is possible that other factors not controlled in this study could impact audit quality. However, this study does not aim to test causality; instead it endeavours to determine the relationship between audit quality and attributes of AC effectiveness. Therefore, the effects of this specific limitation on the findings may be considered to be of minor consequence.

## 12.6.2 Potential Limitations of the Questionnaire Survey Study

The findings rely on the respondents' self-reported cross-sectional data, as opposed to longitudinal data. This may not reflect changing situations and the series of relationships phenomena between EAs and ACMs over a period of time. The cross-sectional data may be affected by the respondent's predisposition of any events that have occurred in the past or by the mental position at the period of filing in the questionnaire.

Notably, the data have been collected only from EAs. This might not explore the full picture of trust and interactions between EAs and ACMs, because interactions between them are predicated on EAs' cooperation with ACMs and vice versa. The data have been collected from EAs who performed audits for Hong Kong listed companies. This facilitated data collection and control-ling diversity, but limited the generalisation of the findings.

The findings may also be subject to selection bias. It is more likely that EAs with a high level of satisfaction with ACMs may respond to the questionnaire survey. Unsatisfied EAs may opt not to participate in the questionnaire survey. This implies that this research may not capture the effects of extreme low levels of EAs' trust on their interactions.

Moreover, this study only used semi-structured questionnaire survey, so the researcher could not probe in-depth questions by asking the respondents following questions. Therefore, this research may not generate data for the analysis of in-depth relationships between trust and audit quality. Further, this research did not collect EAs' personal data such as gender, experience and Big 4 auditors. This may influence how EAs trust ACMs and their actions with ACMs.

This study only focuses on the positive aspect of trust on their interactions and audit quality, but it may result in negative effects as discussed in Section 7.1, so this study does not show the negative impacts of trust on audit quality.

It only examines the effects of EAs' trust on the interactions between EAs and ACMs, but ignored the interactions between EAs and finance managers or between EAs and internal audit managers.

## **12.7 Recommendations for Future Research**

This study's results provide evidence (in the archival modelling study) that a number of corporate governance attributes significantly relates to audit quality in Hong Kong. However, there are several areas that are not covered by this study but could be of relevance to corporate governance and audit quality. One possible avenue for future research is testing additional AC characteristics that may influence audit quality. Examples for such additional characteristics include the diversity of ACMs' expertise, their scandals and other controversial news, education levels and diversity of their ethnicity in Hong Kong.

Another avenue for future research is to evaluate the impacts of AC characteristics on other aspects of audit quality, such as abnormal audit fees controlled for audit risk factors or abnormal market returns. It would be interesting to investigate the effects of these factors on these the measures of audit quality.

The number of institutional investors significantly relate relate to audit quality. It is interesting to observe that the beta co-efficient is positive. This is different from the findings of prior research in that institutional investors provide additional monitoring mechanism on audit quality. The number of institutional investors may increase managers' pressure to meet the earnings target so they may even engage in aggressive earnings management, particularly in the aftermath of the financial crisis. Future research may investigate the impacts of the number of institutional investors may investigate the impacts of the number of institutional investors on audit quality.

As this study covers large firms and excludes financial companies, future research would do well to investigate the effects of AC characteristics on audit quality in smaller companies or financial companies. In the questionnaire survey study, future research may examine the effects of different levels of EAs' trust in ACMs' competence on the perception of the quality of interactions with ACMs. It is possible that if they are highly competent, they may not want to interact with EAs by thinking they are competent, despite wanting to interact with them. Therefore, the perceptions of the quality of interactions remain low. The competence trust may have a U-curve effect. The reason is that highly competent ACMs may become too self-arrogant, so they do not think that interactions with EAs are useful. This may provide explanation to the insignificant correlation between their trust in ACMs' competence and the perception relating to the quality of interactions with them in this study. Furthermore, since the questionnaire survey study is unilateral because questionnaires were sent to only EAs, future research may investigate the effects of ACMs' trust in EAs on audit quality.

Future research may also combine both archival modelling and questionnaire survey studies in AC characteristics and audit quality. It would be interesting for future research to examine the moderating impacts of EAs' trust on the relationship between AC characteristics and audit quality. Their trust in ACMs is expected to strengthen the positive relationship between effective AC characteristics and audit quality.

It can use semi-structured or unstructured interviews to explore the issues of EAs' trust and audit quality in an in-depth manner. For instance, future research can use follow-up questions to inves-

tigate deeper issues than this research. Also, it can collect EAs' personal data to analyse whether male or female EAs, Big 4 auditors, or EAs with ten year experience will respond differently. In this way, future research will be able to contribute to the existing literature by providing more insight into how to manage the trust relationships between EAs and ACMs so that audit quality will be enhanced. Meanwhile, interviews can be used to probe in-depth questions to investigate the positive and negative effects of trust on their interactions and audit audit quality.

It may investigate the effects of trust on the interactions between EAs and finance managers or between EAs and internal audit managers. Since EAs' responsibility is to audit the financial reports prepared by finance managers, their position is in conflict because EAs and finance managers have different goals. Therefore, it is expected that high levels of EAs' trust in managers may reduce their independence from managers, so audit quality may be reduced. However, since internal audit managers report to ACMs, they should have the same goal as the ACMs, so the effects of EAs' trust in them may help to improve audit quality.

## **12.8 Chapter Summary**

This chapter presents a summary and the conclusions of the research. After restating the research question, it outlines the research methods that have been undertaken to answer the research question. The results of this research are summarised, after which their implications have been discussed. The potential limitations of this research are then presented before the avenues for future

research are highlighted.

The archival modelling study finds that effective AC characteristics may enhance audit quality. The results show that AC size, competence, tenure and age are key characteristics to discretionary accrual. This indicates that these characteristics help enhance audit quality to constrain earnings management. The questionnaire survey study observes that ACMs' competence, integrity and goodwill are important determinants of EAs' trust and that their trust helps improve the effectiveness and efficiency of audit processes, which results in improved audit quality.

The primary contribution to knowledge of this research study is to expand the body of literature on the role of ACMs in enhancing audit quality and applying it to other fields in the context of auditing research. These results are usable by stock market participants in their evaluation of the roles of ACMs for the purpose of enhancing audit quality. In addition, these findings will also help regulators better define corporate governance attributes and assess the requirements for disclosure of corporate governance practices.

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## Appendices Appendix 1 AC Research in Hong Kong

Authors	Purpose/	Variables	Results
	Statistical Models/Years		
Chau and	Purpose: investigate the	Dependent variables:	Family shareholding and
Leung	impacts of family share-	The existence of audit committee	chairman and board inde-
(2006)	holding, non-executive di-		pendence positively related
	rectors and independent	Independent variables:	to the existence of audit
	chairman on the existence	<ul> <li>Family shareholding</li> </ul>	committee
	of audit committees across	<ul> <li>Board independence</li> </ul>	
	a sample of 397 publicly	<ul> <li>Independence of chairman</li> </ul>	
	traded firms in Hong Kong.		
		Control variables:	
	Statistical Model: logistic	<ul> <li>Net profit before extraordi-</li> </ul>	
	regression model	nary items over book value	
	_	of equity	
	Year: 2002	• Net sales	
		• Current ratio	
		<ul> <li>Long-term debt over book</li> </ul>	
		value of common equity	
		• Big 4 auditor	
Chan et al.	Purpose: examine specific	Dependent variables:	S8 negatively related to
(2011)	structural and operational	<ul> <li>Tobin's Q</li> </ul>	Tobin's Q
	characteristics of ACs for		
	firms in Hong Kong, where	Independent variables:	OP2 positively related to
	regulators have strived to	AC structure and operation varia-	Tobin's Q.
	adhere to international	bles	
	compliance standards		OP5 negatively related to
		• S1: AC financial expertise	Tobin's Q

Statistical Model: OLS	• S2: AC independence	
	• S3: average AC tenure	CG1 negatively related to
Year: 2006	• S4: percentage of ACMs re-	Tobin's Q
	tired during the year.	
	• S5 :average AC directorships	FC1 positively related to
	• S6: whether any ACM was	Tobin's Q
	the company's former audi-	
	tor.	FC2, FC3 and FC4 nega-
	• S7: whether any ACM was	tively related to Tobin's Q
	the company's former of-	
	ficer.	
	• S8: average AC remunera-	
	tion	
	• OP1: coverage of the terms	
	of reference	
	• OP2: sufficiency of re-	
	sources provided to the AC.	
	• OP3: proper minutes for AC	
	meetings kept.	
	• OP4: change of AC Chair	
	• OP5: number of AC meet-	
	ings	
	• OP6: average attendance rate	
	of AC meetings.	
	Firm characteristic control varia-	
	bles	
	• FC1: natural log of the mar-	
	ket capitalisation	
	• FC2: natural log of the lev-	
	erage	
	• FC3: the numbers of years	
	listed in the Exchange.	

		<ul> <li>FC4: natural log of the ratio of PPE to turnover.</li> <li>Corporate governance control variables.</li> <li>CG1: ownership of the largest shareholder.</li> <li>CG2 percentage of INEDs in the board.</li> <li>CG3 (Duality): whether the positions of the CEO and the board chair are held by the same person</li> </ul>	
Jaggi and Leung (2007)	Purpose: examine whether the establishment of audit committees by Hong Kong firms would constrain earn- ings management, especial- ly in firms with family- dominated corporate boards, a condition unique to Hong Kong. Statistical Models: simul- taneous regression models, three-stage (3SLS) regres- sion and OLS controlling for endogeneity among earnings management Years 1999-2000	<ul> <li>Dependent variable:</li> <li>Absolute value of discretionary accruals (modified Jones model)</li> <li>Absolute value of performance-adjusted current discretionary accruals</li> <li>Independent variables: Natural log of the total number of directors on the board.</li> <li>Ratio of net income before extraordinary items to total assets.</li> <li>Proportion of family mem-</li> </ul>	Overall audit committees play a significant role in constraining earnings man- agement even in the busi- ness environment of higher ownership concentration. The effectiveness of audit committees is, however, significantly reduced when family members are pre- sent on corporate boards, especially when family members dominate the corporate board.

	bers	
	• Board independence	
	• Number of shares held by Chief Executive Officer di- vided by the total number of shares outstanding.	
	• Number of shares held by all non-executive directors divided by the total number of shares outstanding.	
	• Natural log of one plus the total number of subsidiaries incorporated outside Hong Kong.	
	• Natural log of the total assets in US dollars in million.	
	• Ratio of long term debt to total assets.	
	• Ratio of the firm's market value of common equity to book value of common equity to ty at the beginning of fiscal year.	

		<ul> <li>Absolute value of change in net income before extraordinary items between years t – 1 and t, scaled by lagged total assets.</li> <li>Ratio of fixed assets to the sum of the market value of ordinary share capital and the book values of preference capital and debt.</li> <li>Presence of audit committee</li> <li>Big 5 auditor</li> </ul>	
		• Loss	
Ching, Firth and Rui (2006)	Purpose: the study exam- ined the use of discretion- ary current accruals by firms that make seasoned equity offers (SEOs). Statistical Model: OLS Years: 1993-2000	<ul> <li>Dependent variables</li> <li>Post-issue earnings performance (computed as the first difference in annual ROA. ROA is defined as income before extraordinary items scaled by beginning assets less the proceeds from the SEO)</li> <li>Independent variables: Pre-issue discretionary cur-</li> </ul>	Family-owned firms are more likely to use positive discretionary accruals prior to making an SEO. Independent directors and outside blockholders con- strain earnings manage- ment in family-controlled firms. SEO firms that have a larger board size have a higher degree of earnings management around SEOs.

	rent accruals.
	<ul> <li>Non-discretionary current accruals</li> </ul>
	• Operating cash flow scaled by prior total assets.
	• Post-issue earnings perfor- mance.
	• Post-issue returns
	• Pre-issue family control
	• Board independence
	• Board size
	• Blockholders
	• Big 6 auditors
	<ul> <li>Market capitalization in \$million.</li> </ul>
	• Book-to-market
	• Extreme earnings perfor- mance.

Lee and Barnes (2017)	Purpose: the study investi- gated the corporate gov- ernance and performance between founding family firms and non-founding family firms in Hong Kong, and the performance inside founding family firms under three different management status. Statistical Models: OLS/IV-2SLS Regression	<ul> <li>Financial leverage.</li> <li>Total assets in \$million.</li> <li>Offering frequency dummy</li> <li>Security type dummy (placing = 1, rights offer = 0)</li> <li>Dependent variables: <ul> <li>Tobin's Q</li> <li>Return on assets</li> <li>Return on equity</li> </ul> </li> <li>Independent variables: <ul> <li>Ln_Age of firms</li> <li>Board Size</li> <li>Board Independence</li> <li>Family members</li> <li>Total Assets</li> </ul> </li> </ul>	LnAge of firms, board size and independence are sig- nificant with ROA. In IV-2SLS regression, the result is consistent with the OLS results.
Cheng, Lui and Shum. (2015)	Years: 2008-2012 Purpose: the study investi- gated the effects of the cri- sis from 2008 to 2009 on the share performance of 976 companies listed on the Hong Kong Stock Ex- change in the Hong Kong SAR and examined the link between share performance	<ul> <li>Dependent variables:</li> <li>AbnorRtn measures the cumulative share return adjusted by the market return for the same period, based on the HKHSI.</li> <li>Rtn_Fall is calculated by</li> </ul>	The results present evi- dence that firms which had a higher proportion of in- dependent directors and a greater concentration of ownership had lower share performance, but lower price volatility, during the global financial crisis.

and corporate governance	subtracting the starting price
mechanisms.	for the period from the abso-
	lute value of the lowest
Statistical Model: OLS	price, dividing by the start-
	ing price and multiplying by
Years: 2008-2009	100%.
	Der Deurse is calculated by
	• Rtn_Bounce is calculated by
	subtracting the lowest price in the period from the abso-
	lute value of the highest
	price after the occurrence of
	the lowest price (trough), di-
	viding by the lowest price
	and multiplying by 100%.
	• Day_Fall is the number of
	trading days between the
	start of the period and the
	trough
	• Day_Bounce is the number
	of trading days between the
	trough and the rebound to
	the highest price (peak)
	• Independent variables:
	• Duality of Chairman and
	CEO
	• Chairman of the BODs is a

· · · · · ·	•		
		non-executive director (NED)	
	•	Size of the BODs	
	•	Adoption of the three key committees (Audit, Remu- neration and Nomination)	
	•	Board independence	
	•	AC independence	
	•	Remuneration Committee independence	
	•	Proportion of shares held by independent directors on the Audit Committee	
	•	Proportion of shares held by independent directors on the Remuneration Committee	
	•	Proportion of shares held by the CEO	
	•	Proportion of shares held by the directors excluding the CEO	
	•	Proportion of shares held by	

		<ul> <li>substantial shareholders excluding inside shareholdings</li> <li>Leverage</li> <li>Log value of sales</li> <li>Industry</li> </ul>	
Cheung et al. (2011)	Purpose: the study exam- ined the relation between changes in the quality of corporate governance prac- tices and subsequent mar- ket valuation among large listed companies in Hong Kong. Statistical Model: fixed effect panel data regression with firm clustering Years: 2002 -2005	<ul> <li>Dependent variables:</li> <li>Change in Tobin's Q</li> <li>Change in market-to-book ratio</li> <li>Independent variables:</li> <li>Percentage change between the corporate governance index (CGI) in the current survey year and the score in the preceding survey year.</li> <li>The CGI score ranges from 0 to 100. The survey covers five areas: 1) rights of shareholders, 2) equitable treatment of shareholders, 3) role of stakeholders, 4) disclosure and transparency, and 5)</li> </ul>	Firms that exhibited im- provements in the quali- ty of corporate govern- ance displayed a subse- quent increase in market valuation. Additionally, the impact is greater for firms that are included in the MSCI index or with a China affiliation. The results provide evidence in support of the notion that good corporate governance can predict future market valuation

board responsibilities
<ul> <li>Change in the transparency index in the current survey year and the score in the pre- ceding survey year. TDI is composed of disclosure- related questions from the corporate governance survey</li> </ul>
• Change in the non- transparency index in the current survey year and the score in the preceding survey year. Non_TDI is composed of the remaining survey questions from the corporate governance survey that are not included in the TDI
<ul> <li>Natural logarithm of total assets in millions of Hong Kong dollars</li> </ul>
• Change in ROA
• Return on assets
• Debt ratio
• Arithmetic average of the annual growth rate in sales

	over the preceding three years
	• Cash to assets ratio
	<ul> <li>Net plant, property, and equipment divided by total sales</li> </ul>
	• Capital expenditures divided by total assets.
	• Dummy variable that is equal to 1 if the firm is in- cluded in the MSCI index and 0 otherwise
	• Dummy variable that is equal to 1 if the firm is a "red-chip" or H-share firm and 0 otherwise
	• Dummy variable that is equal to 1 if the CGI score is above the median value of the CGI averaged over three preceding surveys
	• Dummy variable that is equal to 1 if SIZE is above the median value of total as- sets averaged over 2002-

		2005	
		• Dummy variable that is equal to 1 if the value of GROWTH is above the me- dian growth rates of sales over the three previous years	
		• Dummy variable that is equal to 1 if the change in the CGI score (CGI) is less than or equal to 0, implying that the CGI did not improve or deteriorated from the preceeding survey	
		• Dummy variable that is equal to 1 if a firm has a To- bin's Q value over the medi- an value of Tobin's Q aver- aged over 2002-2005	
		• Dummy variable that is equal to 1 if a firm has a market-to-book value over the median value of MVBV averaged over 2002-2005	
Lin, Hutchinso n and Per- cy. (2015)	Purpose: the study extend- ed research on the corpo- rate governance practices of transitional economies	<ul> <li>Dependent variables:</li> <li>Abnormal accruals models estimated by the modified Jones model (Jones 1991)</li> </ul>	AC independence and ex- perience are negatively as- sociated with earnings

by examining whether the	and Butler et al. (2004) as a	management.
ability of the audit commit- tee to constrain earnings	proxy for earnings manage- ment.	
management in Chinese	ment.	There was a significant and positive association be-
firms is associated with the listing environment and the presence of government officials on the audit com- mittee.	<ul> <li>Independent variables:</li> <li>Dummy variable 1 if a Chinese listed firm is cross listed on the Hong Kong Stock Exchange, and 0 if listed in mainland China only</li> </ul>	tween audit committee in- dependence and experience and earnings management when there are government officials on the audit com- mittee.
Statistical Model: Random effects generalised least square (GLS) regression estimated with clustered- robust	• Dummy variable 1 if an au- dit committee includes gov- ernment officials as inde- pendent members; otherwise 0	
Years: 2004-2008	• Dummy variable 1 if a listed firm has an audit committee; otherwise 0	
	• Number of independent di- rectors divided by total number of directors on the audit committee	
	• A factor score of independ- ent audit committee mem- bers' accounting, financial and industry experience is created by using principal components' factor analysis	

	and scaled by audit commit- tee size
	Control variables
	Dummy variable 1 if the proportion of State share- holdings to total issued shares is greater than or equal to the median; other- wise 0
	Dummy variable 1 if the firm is audited by a Big4 ac- counting firm; otherwise 0
•	Leverage
	Dummy variable 1 for ROE less than zero; otherwise 0
•	Book to market value
	Firm size is measured as to- tal assets in million RMB. A natural logarithmic trans- formation is performed to normalise data
	Dummy variable for each year 2004, 2005, 2006, 2007

and 2008	

Amendments to Questions after Pilot-testing			
Comments and Responses	Old Questions	New Questions	
Comments: The new question should help to receive more insights into audit approaches, not just risk assessment because the new question includes broader ap- proaches of an audit. Responses: I change the question to new question so that I can capture broader approaches of an audit.	<ul><li>22. Please explain how your level of trust in audit committee members affects your evaluation of audit risks.</li><li>If appropriate, please describe an illustrative example from your own experience.</li></ul>	<ul> <li>22. Please explain how your level of trust in audit committee members affects communications of your approaches to audit committee members.</li> <li>If appropriate, please describe an illustrative example from your own experience.</li> </ul>	
<b>Comments:</b> Determination of scope highly depends on trust in manage- ment rather than audit commit- tee members. Audit committee members and EAs have more communica-	<ul><li>23. Please explain how your level of trust in audit committee members affects the determination of the scope of the external audits.</li><li>If appropriate, please describe an</li></ul>	23. Please explain how your level of trust in audit committee mem- bers affects your level of open- ness when you provide recom- mendations for improving their internal control systems	

## Appendix 2 Amendments to Questions after Pilot-testing

tions when EAs report findings and recommendations. <b>Responses:</b> I change the question to new question so that I can under- stand the effects of trust on the interactions between EAs and ACMs when EAs report find- ings and recommendation.	illustrative example from your own experience.	If appropriate, please describe an illustrative example from your own experience.
<b><u>Comments:</u></b> Trust in ACMs does not affect EAs' ability to determine the appropriateness of clients' ac- counting estimates, but affects EAs' approach for an audit such as control-based or sub- stantive approaches.	<ul><li>24. Please explain how your level of trust in audit committee members affects your ability to determine the appropriateness of your clients' accounting estimates.</li><li>If appropriate, please describe an illustrative example from your own experience.</li></ul>	24. Please explain how your level of trust in audit committee mem- bers affects the relative emphasis on substantive approaches versus control-based approaches of au- diting.
<b><u>Responses:</u></b> I change the question to new question so that I can under- stand howEAs' trust in ACMs affects their audit approaches.		If appropriate, please describe an illustrative example from your own experience.

## Appendix 3 Participant Information Sheet



## The Effects on Audit Quality of Trust between Audit Committee Members and External Auditors: Evidence from Hong Kong

Dear XXXX

This questionnaire is part of a research project to understand the effects on audit quality of trust between audit committee members and external auditors. Your responses are important in enabling me to understand this issue.

This questionnaire should take about 15 minutes to complete. The information you provide will be treated in the strictest confidence. You are not asked to include your name, or address anywhere on the questionnaire. Your participation is optional. You will be able to withdraw from the study without any penalty or reason. However, since the information will be processed anonymously, participation may not be withdrawn when filled questionnaire has been received because it is not possible to identify specific response by individual.

The responses will be used as the main data source for my degree of Doctor of Philosophy in Accounting and Finance at the University of the West of England. If you would like to be emailed a summary of the responses obtained in this research, please supply your email address at the end of the form.

I hope that you will find completing the questionnaire enjoyable. Please return the completed questionnaire to me in the return envelope or via email.

Thank you for your help.

Cheung Kwok Yip (Steven) Doctoral Student Bristol Business School The University of the West of England Coldharbour Lane, Bristol United Kingdom

Telephone:

Email:

Appendix 4 Consent Form



Project title: The Effects on Audit Quality of Trust between Audit Committee Members and External Auditors: Evidence from Hong Kong

I confirm that I have read and understand the participant information sheet for the above study and have had the opportunity to ask questions. I understand that I will be able to withdraw from the study without any penalty or reason but since the information will be processed anonymously, participation may not be withdrawn when filled questionnaire has been received because it is not possible to identify specific response by individual.

I consent to participating in the questionnaire survey

Name of Participant

Signature of Participant

Signature of Researcher

Date

Cheung Kwok Yip (Steven) Doctoral Student Bristol Business School The University of the West of England Coldharbour Lane United Kingdom

Telephone:

Email:

## Appendix 5 Questionnaire Survey

This questionnaire is to be completed by the external auditor. For statements 1-20, please indicate which of 1 to 5 best represents your general experience with audit committee members in external audits. For questions 21-24, please write your responses on the space provided next to the questions.

		Strongly Disagree	Disagree	Neither Agree nor Disagree	Agree	Strongly Agree
1.	Audit committee members are generally an important source of information about the conduct of senior man- agement for pre- engagement investigation.	1	2	3	4	5
2.	Audit committee members are generally willing to dis- cuss their company's gov- ernance structure with me for pre-engagement inves- tigation.	1	2	3	4	5

3.	Audit committee members are generally willing to tell me their company's policies about the supervision of quality control process of financial reporting.	1	2	3	4	5
4.	I generally have productive discussions with audit committee members when assessing clients' business risk	1	2	3	4	5
5.	Audit committee members generally meet with me without the attendance of management and executive directors.	1	2	3	4	5
6.	I am generally satisfied that audit committee members properly follow up out- standing actions arising from my discussions with them.	1	2	3	4	5

et co th	n general, I communicate ffectively with audit ommittee members about ne approach to monitor in- ernal control systems.	1	2	3	4	5
u to	often openly communicate nadjusted audit differences o audit committee mem- ers.	1	2	3	4	5
n ti n	n general audit committee nembers support my posi- on when I have disagree- nents with clients' man- gement.	1	2	3	4	5
at ha w	am generally satisfied that udit committee members ad appropriate dialogues with me on the major issues rom the external audit.	1	2	3	4	5
d: co ho	generally have productive iscussions with audit ommittee members about ours to be spent on exter- al audits.	1	2	3	4	5

12. In my experience as an ex- ternal auditor, I rarely ques- tion audit committee mem- bers' capabilities.	1	2	3	4	5
13. The ability of audit com- mittee members is general- ly important to the smooth working of the audit pro- cess.	1	2	3	4	5
14. In general, I could rely on audit committee members' knowledge to facilitate my audit planning.	1	2	3	4	5
15. Audit committee members generally address auditing and reporting issues honest- ly.	1	2	3	4	5
16. I find that audit committee members' actions often match their words when they are asked about how they evaluate internal con- trol systems.	1	2	3	4	5

17. I feel that I rarely need to be aware that information from audit committee members may be mislead- ing.	1	2	3	4	5
<ol> <li>Audit committee members are generally reputable and I am inclined to trust them.</li> </ol>	1	2	3	4	5
19. I can generally rely on audit committee members to help me beyond the minimum requirements of the formal engagement contract.	1	2	3	4	5
20. In dealing with audit com- mittee members, I generally do not spend a lot of time haggling over issues such as responsibility for prob- lems.	1	2	3	4	5
For questions 21-24, please write	e your responses	s on the space p	rovided next to t	he questions	

<ul><li>21. Does your level of trust audit committee members affect your interactions?</li><li>Please identify the ways and effects. If appropriate, please feel free to give an illustrative example from your experience.</li></ul>	
If the ways and effects are not co	wered in your answer to question 21 above, please respond to questions 22-24.
<ul> <li>22. Please explain how your level of trust in audit committee members affects communications of your audit approaches to audit committee members?</li> <li>If appropriate, please describe an illustrative exam-</li> </ul>	
ple from your own experi- ence.	

23. Please explain how your level of trust in audit com- mittee members affects your level of openness when you provide recom- mendations for improving their internal control sys- tems.	
If appropriate, please de- scribe an illustrative exam- ple from your own experi- ence.	
24. Please explain how your level of trust in audit com- mittee members affects the relative emphasis on sub- stantive approaches versus control-based approaches of auditing	
If appropriate, please de- scribe an illustrative exam- ple from your own experi- ence.	

## Appendix 6 Importance of Themes and Sub-themes to Audit Quality

Themes	Themes that emerged from	Importance to audit quality
	sub-themes	
Theme 1	EAs develop trust in ACMs If they perceive that ACMs have and display competence, good- will and integrity.	Only when the factors that influence EAs' trust are identified, EAs and ACMs can manage the levels of trust with ACMs, so the perceptions of the quality of interac- tions can be enhanced by improving the factors that influence EAs' perception of the quality of interactions with ACMs.
Theme 2	The level of EAs' trust in ACMs enables EAs to better understand audit risk and improve discus- sion.	If the level of trust in ACMs is high, EAs can better understand audit risks at the planning stage so that the EAs can design appropriate audit plans and subsequent audit approaches to target for the significant risk area. EAs can better understand audit risks because they will put more efforts to discuss issues and operations of the company with ACMs.
		Also, EAs are more willing to sooner report major issues identified to ACMs. Therefore, ACMs can provide their comments on how the audits can be performed so that the audit will be more appropriate to the operations of a company. ACMs will provide more information to EAs about risk areas, operations and tone of management to EAs.
		The EAs are more willing to incorporate the comments from ACMs into their audit plan so that their audit plan is more specific to the risk and operations of EAs' cli- ents. In doing so, it is reasonable to expect that the scope of audit is appropriate and significant risks should be identified at the planning stage, so audit quality is enhanced.
		Furthermore, it is easier to understand expectation of ACMs. Communications be- come more open and effective, leading to high quality of discussion in meetings

		<ul> <li>between ACMs and EAs at planning stage. Issues will be communicated sooner, so that EAs can deal with the feedback from ACMs with sufficient time before they started performing audit procedures.</li> <li>Extra information beyond statutory requirement will be communicated to ACMs. EAs are also willing to spend more time for discussions about special issues because they believe that ACMs are able to understand it.</li> <li>With feedback from ACMs and high quality of discussions about the audits, EAs should better understand the situations of a company such as tone from the top, operations, indicators of fraud, integrity of management, perceived effectiveness of internal control systems. Therefore, EAs can determine the appropriate resources to be used for the audits and which areas they should focus on. Therefore, it is expected that audit quality is enhanced.</li> </ul>
Theme 3	EAs' trust in ACMs' integrity improves their willingness to provide ACMs with an assess- ment of the quality of manage- ment.	If trust in ACMs' integrity is low, EAs are more hesitant to criticise the perfor- mance of management because EAs will doubt that their comments will be com- municated back to the management. The comments include quality of manage- ment, managers' bias in their judgment, managers' integrity, style and performance of setting up and implementing internal control systems.
		If trust in ACMs' integrity is high, EAs are more willing to provide qualitative as- sessment of management and listen to ACMs about what management is doing. Since EAs have the comments of management from ACMs, EAs are able to per- form more accurate risk assessment and determine whether they can trust the rep- resentations of management.
		For example, if ACMs tell EAs that the management is not trustworthy, EAs will understand that after they have interviewed the management, they should spend

		<ul> <li>more time collecting evidence to corroborate with the representations of management. Since effort will be more appropriately used for corroboration in clients with high risk, audit quality should be enhanced.</li> <li>Further if ACMs receive assessment of management performance, the members can determine the levels of integrity and abilities of managers and whether the members should change managers with high levels of integrity and abilities. If the managers have high levels of integrity, control environment will be improved. If the managers are capable, they can design better internal control systems. Taken together, audit quality will be enhanced.</li> </ul>
Theme 4	EAs' trust in ACMs' ability en- courages EAs to diligently dis- cuss findings and recommenda- tions	If the level of trust in ACMs' ability is high, EAs will be open and candid to pro- vide more recommendations and report their findings. EAs will provide more in- depth analysis and value-adding recommendations. EAs are willing to spend more time exploring recommendation options and discussing rationale behind their rec- ommendations.
		EAs are willing to have more informal meetings with AC members to discuss is- sues. The reason is that EAs are confident that ACMs take the recommendations seriously and have the ability to require the management to implement the recom- mendations.
		Since constructive recommendations are suggested by EAs and implemented by ACMs, internal control systems will be more effective, so audit quality will be enhanced. Further, EAs will also ask more specific questions. If EAs have more technical discussions about risk areas and operation of the clients, they can better understand whether their recommendations and conclusions of their findings are appropriate.

		However, if trust in ability is low, EAs will spend less time having meetings with ACMs because EAs do not believe that there are meaningful results. Low levels of trust may have opposite effects on the level of details of communications because some respondents stated that if the level of trust is low, they will communicate with ACMs in more details and make sure that AC members understand their points.
Theme 5	EAs' trust in ACMs encourages EAs to select control-based more than substantive-based testing.	If the level of trust is high, in general, EAs will use control-based approach more because they believe that ACMs will hold management accountable. EAs also be- lieve that audit risk is less and have higher perception that the clients have better assessment of governance structure.
		If level of trust is high, EAs can trust the statement of ACMs and internal controls can be relied on because the EAs trust that ACMs can effectively oversee the in- ternal control systems. If the level of trust is low, in general, EAs will use substan- tive-based approach more because they are less sure about controls in place.
		EAs also perceive that care of ACMs in overseeing financial reporting is lacking. Since the selection of audit approaches is more appropriate according to the level of risks and effective internal control systems, audit quality will be enhanced.

Codes	Sub-themes that emerged from the codes	Themes that emerged from the sub-
		themes
"experience" (1.1)	1.1 EAs' trust in ACMs is enhanced by	1) EAs develop their trust in
	ACMs' experience.	ACMs due to EAs' perception
"financial background" (1.2)	1.2 EAs' trust in ACMs is enhanced by ACMs'	of ACMs' experience, ability,
	financial background.	financial background, industry
"ability" (1.3)	1.3 EAs' trust in ACMs is enhanced by	knowledge, independence from
	ACMs' ability.	executives, support for EAs,
"industry knowledge" (1.4)	1.4 EAs' trust in ACM is enhanced by ACMs'	involvement in monitoring, in-
	industry knowledge.	tegrity, effectiveness of gov-
"independence" (1.5)	1.5 EAs' trust in ACMs is enhanced by	ernance and control and effort
	ACM's independence.	to follow up outstanding issues
"support" (1.6)	1.6 EAs' trust in ACMs is enhanced by	and respect.
	ACMs' support.	
"involvement in monitoring" (1.7)	1.7 EAs' trust in ACMs is enhanced by in-	
	volvement in monitoring progress.	
"integrity" (1.8)	1.8 EAs' trust in ACMs is enhanced by	
	ACMs' integrity.	
"effectiveness of governance and con-	1.9 EAs' trust in ACMs is enhanced by the	
trol" (1.9)	effectiveness of governance and internal	
	control process.	
	1.10 EAs' trust in ACMs is enhanced by	
"effort to follow up outstanding issues	ACMs' efforts to follow up outstanding is-	

## Appendix 7 Codes and Themes after First Categorisation

and respect from ACMs" (1.10)	sues and by respect from EAs.	
"encourage to ask questions" (2.1) "information exchange" (2.2) "Information beyond statutory re- quirements" (2.2)	<ul><li>2.1 Trust encourages ACMs to ask questions.</li><li>2.2 Trust encourages ACMs to provide more information.</li></ul>	<ol> <li>EAs'trust in ACMs positively affects information flow be- tween them.</li> </ol>
"reporting significant issues" (2.3)	2.3 EAs are more willing to inform ACMs of major issues identified.	
"comments on audit plan" (2.4)	<ul><li>2.4 EAs put more effort into discussing points with ACMs and incorporating their comments into the audit plan.</li></ul>	
"Understanding of expectations" (3.1)	3.1 EAs can better understand ACMs' expecta- tions.	<ol> <li>EAs' trust in ACMs in- creasesEAs' spending of time with ACMs for discussions.</li> </ol>
"Appreciation for strategies" (3.2)	3.2 EAs can effectively communicate audit strategy with ACMs and become willing to listen to ACMs' comments.	
"better quality of discussion" (3.3)	3.3 Quality of discussions between auditors and ACMs is enhanced by auditors' trust	
"early reporting" (3.4)	<ul> <li>3.4 Auditors are more willing to report issues at early stage so that they can incorporate the feedback from ACMs into external au- dits.</li> </ul>	
"openness for communication" (3.5)	3.5 EAs become more open and honest in their	

"time spent on discussion" (3.6)	communications with ACMs. If what? 3.6 EAs will spend more time discussing is- sues with ACMs.	
"meetings" (4.1)	<ul><li>4.1 EAs spend more time and have more meetings with ACMs.</li><li>5.1 EAs are more willing to have discussions</li></ul>	4) EAs' trust in ACMs affect the number of meetings they have.
"technical discussions" (5.1)	about technical issues. 5.2 If trust is high, EAs ' communications with ACMs will be more detailed.	5) The trust affects the levels of details of communications with ACMs.
"detailed communications" (5.2)	rents will be more detailed.	
"assessment of management" (6)	6.1 There are no sub-themes.	6) Trust encourages EAs to assess the performance of manage- ment and report it to ACMs.
"Time for exploration" (7.1)	<ul><li>7.1 EAs spend more time exploring alternatives of recommendations</li><li>7.2 EAs are more open and willing to provide more recommendations or detailed reports of findings.</li></ul>	<ol> <li>Trust encourages EAs to pro- vide recommendations.</li> </ol>
"openness for recommendations" (7.2) "serious actions on recommendation	<ul><li>7.3 EAs are more confident that ACMs are able to and seriously take their recommendations.</li></ul>	
(7.3)	<ul><li>7.4 EAs are confident that ACMs will drive the management to make the changes.</li></ul>	
"driving management to make a change (7.4)	8.1 Trust is only one factor that affects the use of audit approaches but it is not determinative.	8) Trust encourages EAs to select control-based procedures rather than substantive-based proce-

"one factor to consider" (8.1)	8.2 If the level of trust is high, perceived audit risk is low, control-based approaches can be used.	dures.
"risk and audit approaches" (8.2)	8.3 If trust is low, it is less that sure internal control is effective or in place, so substantive test should be used.	
"control strength and audit approaches (8.3)	8.4 If trust is high, tone from the top is appropriate. Since control environment should be effective, control-based tests can be used.	
"tone from the top and audit approaches" (8.4)		

Appendix 8		
Codes and Themes after Second Categorisation		

Codes	Sub-themes that emerged from the codes	Themes that emerged from the
		sub-themes
"experience" (1.1)	1.1 EAs' trust in ACMs develops from experience	1) EAs develop their trust
	of ACMs.	in ACMs due to EAs'
"accounting and finance background"	1.2 EAs' trust in ACMs develops from finance and	perception of ACMs'
(1.2)	accounting expertise of ACMs.	experience, accounting
	1.3 EAs' trust in ACMs develops from involve-	and finance background,
"involvement in monitoring" (1.3)	ment of ACMs' involvement in monitoring.	involvement in monitor-
	1.4 EAs' trust develops from knowledge and abil-	ing, knowledge and abil-
	ity of ACMs.	ity, integrity, independ-
"knowledge and ability" (1.4)	1.5 EAs' trust in ACMs develops from integrity of	ence from executives,
	ACM.	support for EAs, effort
"integrity" (1.5)	1.6 EAs' trust in ACMs develops from independ-	to follow up outstanding
	ence of ACMs.	issues and respect from
"independence" (1.6)	1.7 EAs' trust in ACMs develops from ACMs' support for them.	ACMs
"support" (1.7)	1.8 EAs' trust in ACMs develops from ACMs' ef-	
	fort to follow up outstanding issues.	
"effort to follow up outstanding issues		
and respect from ACMs" (1.8)		
	2.1 Trust encourages ACMs to ask questions at	2) The level of trust ena-
	audit planning stage.	bles EAs and ACMs to
"better information exchange at planning	2.2 Trust encourages ACMs to provide more in-	exchange information
stage" (2.1)	formation in planning stage.	and motivates EAs to
"encourage to ask questions" (2.2)	2.3 EAs are more willing to report major issues	incorporate comments

	identified.	of ACMs. EAs can bet-
"Reporting significant issues" (2.3)	2.4 Auditors can better understand audit risk.	ter understand audit risk.
"better understanding of audit risk" (2.4)	2.5 Auditors put more efforts to discuss points with ACMs and incorporate their comments in	
"appreciation of comments" (2.5)	audit plan.	
	2.6 Tone from the top is appropriate, so EAs can understand that audit risk is less at the plan-	
"understanding of tone from the top" (2.6)	ning stage.	
	3.1 EAs can better understand ACMs' expecta- tions.	<ol> <li>The level of trust en- hances quality of discus-</li> </ol>
"understanding of expectations" (3.1)	3.2 EAs can better communicate audit strategy and respects ACMs' comments.	sions between EAs and ACMs and encourages
"appreciation of comments" (3.2)	3.3 Quality of discussion between EAs and ACMs is enhanced.	EAs to report significant issues at an early stage.
"better quality of discussions" (3.3)	3.4 EAs are more willing to report issues at early stage so that they can incorporate the feedback from ACMs into external audits.	
"early reporting" (3.4)	nom ACMS into externar audits.	
	3.5 EAs become more open and honest in their communications with ACMs.	
"openness for communication" (3.5)	3.6 EAs will spend more time discussing issues with ACMs.	
"time spent on discussion" (3.6)	4.1 EAs spend more time and have more meetings with ACMs. Also, they will have more infor-	4) The level of trust en- courages EAs to spend
	mal meetings with ACMs.	more time on detailed
"meetings" (4.1)	4.2 EAs are more willing to have discussions	discussions about tech- nical audit issues with

	about technical issues.	ACMs.
"technical discussions" (4.2)	4.3 If trust is high, EAs ' communications with ACMs will be more detailed.	
"detailed communications" (4.3)		
"assessment of management" (5)	5.1 There are no sub-themes.	5) The level of trust affects EAs to assess the per- formance of manage- ment and report it to ACMs.
"time for exploration" (6.1) "openness for recommendations" (6.2)	<ul><li>6.1 EAs spend more time exploring alternatives of recommendations.</li><li>6.2 EAs are more open and willing to provide more recommendations or detailed reports of findings.</li><li>6.3 EAs are more confident that ACMs are able to</li></ul>	6) EAs' trust positively af- fects EAs to provide recommendations.
"serious actions on recommendations" (6.3)	<ul><li>and seriously take their recommendations.</li><li>6.4 EAs are confident that ACMs will drive the management to make the changes.</li></ul>	
"drive management to change" (6.4)	<ul><li>7.1 Trust is only one factor that affects the use of audit approaches but it is not determinative.</li><li>7.2 If the level of trust is high, perceived audit risk is low, control-based approaches can be used.</li><li>7.3 If trust is low, it is less that sure internal con-</li></ul>	<ol> <li>EAs' trust positively af- fect EAs' selection of control-based approach and substantive-based</li> </ol>
"trust is one of the factors to consider"	trol is effective or in place, so substantive test	approaches.

(7.1)	should be used.	
	7.4 If trust is high, tone from the top is appropri-	
"risk and audit approaches" (7.2)	ate. Since control environment should be effec-	
	tive, control-based tests can be used.	
"control strength and audit approaches"	7.5 If trust in ACMs is low, trust in management is	
(7.3)	low, so it is suspected that management sets up	
	effective internal control systems, so substan-	
	tive test should be used.	
"tone from the top and audit approaches"		
(7.4)		
"trust in management and selection of		
approaches" (7.5)		

Appendix 9		
<b>Codes and Themes after Third Categorisation</b>		

Codes	Sub-themes that emerged from the codes	Themes that emerged from the sub-
		themes
"experience" (1.1)	1.1. EAs' trust in ACMs develops from ex-	1) EAs develop trust in ACMs
	perience of ACMs.	due to their perception of
"competence" (1.2)	1.2. EAs' trust in ACMs develops from	ACMs' experience compe-
	competence of ACMs.	tence, diligence, independ-
"diligence" (1.3)	1.3. EAs' trust in ACMs develops from in-	ence from executives and
	volvement of ACMs of monitoring.	their integrity.
"integrity" (1.4)	1.4. EAs' trust in ACMs develops from in-	
	tegrity of ACMs.	
"Independence and support" (1.5)	1.5. EAs' trust in ACMs develops from in-	
	dependence and support of ACM.	
"information exchange at planning an au-	2.1 Trust encourages ACMs to provide more	2) The level of trust enables
dit" (2.1)	information at planning stage.	EAs and ACMs to have bet-
	2.2 Auditors can better understand audit risk.	ter quality of audit plan
"better understanding of audit risk" (2.2)	2.3 Auditors put more efforts to discuss	
"effort and appreciation" (2.3)	points with ACMs and incorporate their	
	comments in audit plan.	
	2.4 Quality of discussion between auditors	
"better quality of discussions" (2.4)	and ACMs is enhanced.	

"honest and open discussions" (2.5) "time spent on discussions" (2.6)	<ul><li>2.5 Auditors become more open and honest in their communications with ACMs.</li><li>2.6 EAs will spend more time discussing is- sues with ACMs.</li></ul>	
"trust in ACMs' integrity and assessment of management performance" (3)	3.1 There are no sub-themes.	<ol> <li>The level of trust affects au- ditors to assess the perfor- mance of management and report it to ACMs</li> </ol>
<ul> <li>"open recommendations and reporting" (4.1)</li> <li>"abilities to adopt and attitude towards recommendations" (4.2)</li> <li>"drive management to make changes" (4.3)</li> </ul>	<ul> <li>4.1. Auditors are more open and willing to provide more recommendations or detailed reports of findings.</li> <li>4.2. Auditors are more confident that ACMs are able to and seriously take their recommendations.</li> <li>4.3. EAs are confident that ACMs will drive the management to make the changes.</li> </ul>	4) The level of trust affects EAs to provide recommendation
"meetings with ACMs" (5.1)	<ul> <li>5.1. EAs spend more time and have more meetings with ACMs. Also, they will have more informal meetings with ACMs.</li> <li>5.2. EAs are more willing to have discussions about technical issues.</li> </ul>	5) The level of trust encourages EAs to spend more time on detailed discussions about technical audit issues with ACMs

"trust in ACMs' abilities and technical discussions" (5.2) "trust in ACMs' abilities and detailed communications (5.3)	5.3. If trust is high, auditors' communications with ACMs will be more detailed.	
"one factor for consideration of the use of approaches only" (6.1) "high trust and less risks" (6.2) "internal	<ul><li>6.1 Trust is only one factor of the factors that affect the use of audit approaches but it is not determinative.</li><li>6.2 If the level of trust is high, perceived audit risk is low, control-based approaches can be used.</li></ul>	<ol> <li>The level of EAs' trust in ACMs encourages EAs ' se- lection of control-based or substantive-based testing.</li> </ol>
control weaknesses and "audit approaches" (6.3)	<ul><li>6.3 If trust is low, it is less that sure internal control is effective or in place, so substantive test should be used.</li><li>6.4 If trust is high, tone from the top is ap-</li></ul>	
"tones from the top and audit approaches" (6.4)	<ul><li>propriate. Since control environment should be effective, control-based tests can be used.</li><li>6.5 Trust in management is more important</li></ul>	
"trust in management" (6.5)	to affect selection of audit approaches.	

## Appendix 10 Codes and Themes after Fourth Categorisation

Codes	Sub-themes that emerged from the codes	Themes that emerged from the sub-
		themes
"competence"(1.1)	1.1. EAs' trust in ACMs develops from	1) EAs develop trust in ACMs If
« 1·1·	ACMs' competence.	they perceive that ACMs have
"diligence"(1.2)	1.2. EAs' trust in ACMs develops from ACMs'	and display competence,
"Independence" (1.2)	goodwill.	goodwill and integrity.
"integrity" (1.3)	1.3. EAs' trust in ACMs develops from ACMs' integrity.	
"information exchange at planning an	2.1. EAs can better understand audit risk and	2) EAs' trust in ACMs enables
audit" (2.1)	appreciate the feedback from audit com- mittee member.	EAs to better understand audit risk and improve discussion.
"better understanding of audit risk"		Ĩ
(2.1) and "effort and appreciation (2.1)		
"better quality of discussions" (2.2)		
	2.2. Quality of discussion between EAs and	
"honest and open discussions" (2.2)	ACMs is enhanced.	
"time spent on discussions" (2.2),		
"meetings with ACMs" (2.2) and		
"technical discussions" (2.2)		

"trust in ACMs' integrity and assess- ment of management performance" (3) "open recommendations and reporting"	3. There are no sub-themes	<ol> <li>EAs' trust in ACMs' integrity improves their willingness to provide ACMs with an as- sessment of the quality of management.</li> </ol>
<ul> <li>(4.1)</li> <li>"abilities to adopt and attitude towards recommendations" (4.2)</li> <li>"drive management to make changes" (4.3)</li> <li>"time spent for discussion" (4.4)</li> <li>"detailed and technical discussion" (4.4)</li> </ul>	<ul> <li>4.1. EAs are more open and willing to provide more recommendations or detailed reports of findings.</li> <li>4.2. EAs are more confident that ACMs are able to and seriously take their recommendations.</li> <li>4.3. EAs are confident that ACMs will drive the management to make the changes.</li> <li>4.4. EAs spend more time and have more meetings with ACMs to discuss technical and detailed audit issues.</li> </ul>	<ul> <li>EAs' trust in ACMs' ability encourages EAs to diligently discuss findings and recom- mendations</li> </ul>
<ul> <li>"high trust and less risks" (5.1)</li> <li>"internal control weaknesses and audit approaches" (5.2)</li> <li>"tones from the top and audit ap-</li> </ul>	<ul><li>5.1. If the level of trust is high, perceived audit risk is low, control-based approaches can be used.</li><li>5.2. If trust is high, tone from the top is ap-</li></ul>	5) EAs' trust in ACMs encour- ages EAs to select control- based more than substantive- based testing.

propriate. Since control environment should be effective, control-based tests can be used.
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