EARNINGS MANAGEMENT AND AUDIT QUALITY:

EVIDENCE FROM SOUTHEAST ASIA

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ABSTRACT

This thesis contributes quantitative and qualitative evidence from Southeast Asia to the literature on earnings management and audit quality. The association between earnings management and audit quality is investigated primarily by a new measure of audit quality and a new probit model. The tests of the probit model cover time-series data from 1992 to 2011 for 2,148 listed companies in Indonesia, Malaysia, the Philippines, Singapore and Thailand with a total of 20,757 firm-year observations. To extend the results of the probit model and to explore the stakeholders of audits' perspectives on earnings management and audit quality, 16 semi-structured interviews with respondents from the audit firms, the listed companies, the regulators and the academic institute in Malaysia, Thailand and Singapore are also conducted.

This thesis finds that the term *earnings management* is seen differently from its extant definition. In addition, this thesis provides evidence that the different roles in the process of an audit lead to different definitions and measures of audit quality; therefore, audit quality remains an imprecise measure. The evidence of this thesis also indicates that in the context of Southeast Asia, big firms have higher quality audits than non-big firms. This is likely to be because big firms are more concerned with their reputation and the serious consequences of an audit failure and big firms are perceived to have more resources.

This thesis also explores whether long audit tenure impacts audit quality. The evidence on this suggests that audit partner rotation rather than audit firm rotation is being appointed by key stakeholders. Moreover, there is evidence that in comparison to audit firms from Singapore, those from Malaysia are more tolerant of earnings management whilst those from Indonesia, the Philippines and Thailand are less so. This thesis goes on to explore the possible impact of some national level factors such as the number of registrant audit firms, the use of non-English standards, corporate governance and type of legal system. From the probit model tests, it was found that non-English accounting standards and a limited number of registrant audit firms did not restrict audit quality, as perceived by some key stakeholders of audits.

Keywords: Earnings Management, Audit Quality, Southeast Asia.

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ACKNOWLEDGEMENT

AUTHOR'S DECLARATION

All the research presented in this thesis was initiated and carried out by the author from January 2011 to July 2014 under the supervision of Dr Keith Anderson and Dr Shraddha Verma, who commented and gave suggestions on the design, conduct of the project, analysis of the data and interpretation of the results. However, the author is responsible for the research presented in this thesis. This thesis has not been previously submitted for another award at this or any other university.

DEDICATION

A great effort is always rewarded with the greatest achievement.

My big effort to achieve my PhD I dedicate to my dear departed father.

CHAPTER 1

OVERVIEW OF THE THESIS

1.1 INTRODUCTION

The series of accounting scandals in the US (Sunbeam, Cendant, Waste Management, Enron and Worldcom) and in Europe (ComRoad in Germany) at the end of the 20th century and the beginning of the 21st century has again turned researchers' attention to the study of earnings management. These high profile fraudulent accounting scandals were generally attributed to earnings management (e.g. Cullinan, 2004) and caused the mass media to ask why the auditors did not reveal these unusual accounting transactions. This tarnished the auditors' reputation, record and image.

In a capital market where financial reports are a key feature of communication with respect to public firms' performance and financial position, the auditor is perceived to be an effective third party that helps mitigate information asymmetry and conflict of interests between management and investors. Mansi, Maxwell and Miller (2004) identify two roles of an auditor: the information role and the insurance role. As an information intermediary, an auditor is a person who independently and effectively verifies the company's financial statements before they are published. As an insurance provider, on the other hand, an auditor is a person who is legally accountable for damages to financial statement users. Auditors therefore have the primary responsibility of promoting transparency in the financial reporting processes that in turn generates high quality financial statements. In other words, auditors are deemed to be one of the key drivers that help promote the transparency of the stock markets. The public may therefore expect auditors to stop listed companies from engaging in earnings management. Importantly earnings management may be one indicator that could gauge the quality of an audit.

The remainder of this chapter is organised as follows. Sections 1.2 and 1.3 provide the author's motivations for this thesis and the rationale behind it. Section 1.4 delineates the purposes for this thesis. Section 1.5 poses the research questions. Section 1.6 shows how this thesis contributes to the existing literature on earnings management and audit quality.

Section 1.7 presents the analytical propositions and hypotheses of the study. Section 1.8 gives an outline of each chapter.

1.2 THE AUTHOR'S MOTIVATIONS FOR THIS STUDY

I began to be interested in the topic *earnings management* during my masters degree in 2006. This was because, at that time, the number of studies on this topic in Thailand was small. I focused on the role of auditors in detecting earnings management because I aimed to highlight the role of the auditors in promoting the transparency of financial information in the stock market. In addition, my good background knowledge of auditing as a lecturer in auditing and from work experience with one of the big 4 audit firms in Thailand might help me to have a good understanding of how auditors are associated with earnings management. My dissertation title was *Effect of Auditor Change and Opinion Type of a Former Auditor on Earnings Management of Listed Companies in the Stock Exchange of Thailand*. I also believed that the study on the association between auditors and earnings management should be deepened and broadened in the context of an international comparison. These motivations led to the decision to do this thesis.

1.3 RATIONALE BEHIND THIS STUDY

Empirical studies have tried to indicate the relation between auditors, earnings management and audit quality (e.g. Becker, Defond, Jiambalvo and Subramanyam, 1998; Bauwhede, Willekens and Gaeremynck, 2003; Jeong and Rho, 2004). However, the existing evidence still provides varying results and therefore there are several reasons for this study. The rationale behind this study is separated into three areas as follows.

EXPLORING THE TERM *EARNINGS MANAGEMENT*

There is need for more clarification as to the meaning of earnings management. Although empirical studies have defined the term *earnings management* (Beneish, 2001; Healy and Wahlen, 1999; Ronen and Yaari, 2008; Schipper, 1989) and its differences to other terms (e.g. earnings manipulation (Rosner, 2003) and fraud (Yaping, 2006)), the understanding of earnings management remains unclear. It depends on the criteria that are used to distinguish earnings management from other activities by the studies, for example size of material misstatement, generally accepted accounting principles or intentions. These criteria focus primarily on the views of the users of financial statements on earnings

management. There is room for exploring the definition of earnings management that is constructed from the perspectives of auditors, who have a vital role in the financial reporting process, and the viewpoints of other stakeholders around the auditors, especially on how they expect the auditors to deal with earnings management.

Discretionary accruals, a general proxy of earnings management, and methods for computing these accruals are proposed by empirical studies (i.e. DeAngelo, 1986; Healy, 1985; Hribar and Collins, 2002; Jones, 1991). Nonetheless, tests of existing accruals models' performance (Dechow, Hutton, Kim and Sloan, 2012; Dechow, Sloan and Sweeney, 1995; McNichols, 2000) still provide unclear evidence on which model could best capture earnings management. This indicates that there is a need to review empirical studies that developed new accruals models and a need to identify the most effective one.

EXPLORING THE TERM *AUDIT QUALITY*:

The relation between earnings management and audit quality needs to be further explored. Especially, there is need for a good definition of audit quality and a good measure of audit quality. Even though there are attempts to define the term *audit quality* (e.g. Lu, 2006; Gaver and Perterson, 2007; Gul, Fung and Jaggi, 2009), there is still much debate over the meaning of audit quality. There are many quantitative measures of audit quality used in empirical studies, e.g. discretionary accruals (Jeong and Rho, 2004; Carey and Simnett, 2006; Maijoor and Vanstraelen, 2006); the incidence of issuing a going-concern auditor reports (Carey and Simnett, 2006; Reichelt and Wang, 2010); and the audited client's propensity to report earnings that meet a benchmark (Carey and Simnett, 2006). However, there is still doubt as to which measure is the best one. Therefore, there remains room for developing a definition and measure of audit quality that is based on the views of auditors and the stakeholders who are associated with the audits.

Although factors that influence audit quality are identified by a major number of auditing studies, most of these factors, e.g. auditor independence, auditor scepticism, length of audit-client relationship, auditor specific industry expertise and auditor reputation, seem to be difficult to be quantitatively measured. This leads the author to believe that the understanding of how other factors at engagement, firm and national levels impact on audit quality should be deepened.

BROADENING EVIDENCE TO SOUTHEAST ASIA:

A large number of previous studies of earnings management and audit quality obtain evidence from the big stock markets in the US (e.g. Becker et al., 1998 and Krishnan, 2003) and Europe (e.g. Belgium (Bauwhede et al., 2003); France, the UK and Germany (Moijoor and Vanstraelen, 2006)) where most countries have at least a medium level of investor protection. The study of other continents where there are significant differences in levels of investor protection across countries still needs to be explored.

Owing to their different levels of investor protection and earnings management, this thesis focuses on five countries in Southeast Asia: Indonesia, Malaysia, the Philippines, Thailand and Singapore. According to Leuz, Nanda and Wysocki (2003), Singapore and Malaysia have high investor protection but a low level of earnings management whilst Indonesia, Thailand, and the Philippines have low investor protection but a high level of earnings management. Therefore, these five countries are interesting in the context of a comparative study on how institutional factors impact on audit quality at a national level.

There is also previous empirical evidence that listed companies in Southeast Asia engaged in earnings management during the financial crisis in 1998-1999. Some findings indicate that the crisis affected management's need to engage in earnings management (Charoenwong and Jiraporn, 2009; Darrough, Pourjalali and Saudagaran, 1998), and that management used specific accruals to gain some benefit during this tough period (Chia, Lapsley and Lee, 2007; Saleh and Ahmed, 2005). Therefore this evidence raises the question of how the auditors and some key stakeholders of the audits in Southeast Asia view earnings management.

1.4 THE AIMS AND OBJECTIVES OF THE STUDY

The main interest of the study is to show the linkage between earnings management and audit quality. The objectives of the study are to:

- Explore the definition of the term *earnings management*;

- Identify the accruals model that best captures earnings management;

- Explore the definition of the term *audit quality*;

- Explore and identify measures of audit quality;

- Explore and test the belief that big firms are of higher quality than non-big firms;

- Explore and test whether long audit firm tenure impairs audit quality and whether there is a need for a policy on periodic audit firm rotation; and

- Explore, identify and test factors at a firm level and national level that influence audit quality.

1.5 RESEARCH QUESTIONS

The main question of this study is how audit quality is associated with earnings management. The sub-questions are therefore formulated as follows.

1. What is earnings management?
2. Do auditors have a responsibility to detect earnings management?
3. Which accruals model is the best?
4. What is audit quality?
5. How should we measure audit quality?
6. Is audit quality of big firms better than non-big firms?
7. Does long audit firm tenure reduce audit quality? If so, is there a need to mandate the requirement for audit firm rotation?
8. What other factors influence audit quality?

1.6 CONTRIBUTIONS OF THE STUDY

The primary contribution of this study is to add to the literature on the association between earnings management and audit quality by broadening evidence to Southeast Asia and using a mixed-methods research approach. The specific contributions of the study are listed below.

1. Chapter 3 gives a summary of existing accruals models that are generally used in empirical studies and discusses which accruals model can best capture earnings management. However, this chapter finds that from empirical evidence it is still

difficult to indicate the accruals model that is the most effective in capturing earnings management.

2. Chapter 6 proposes a new measure of audit quality. This measure is concerned with the audit materiality concept. Under the audit materiality concept, audit quality is not impaired if the level of discretionary accruals is below the level of audit materiality. The joint association between the type of an audit report and the level of reported discretionary accruals is therefore used as our new measure of audit quality. Our measure of audit quality is different from those of previous studies that use only the level of discretionary accruals to measure audit quality. Using only the level of discretionary accruals may mislead researchers over the differences in audit quality among their groups of samples if the difference in levels of discretionary accruals is not material.

3. Chapter 6 also develops a new probit model to test the association between a proxy for audit quality and factors that may impact audit quality. The model estimates the probability that an audit firm would issue an audit report with a client's low level of discretionary accruals. An unqualified audit report and a low level of discretionary accruals are indicators of a good audit quality.

4. Although previous studies have provided different definitions of earnings management as shown in Chapter 3, Chapter 8 of this study explores the views of auditors and other stakeholders of the audits on earnings management. Chapter 8 reports mixed views on whether the auditors have responsibility to detect earnings management. Interestingly, audit firms themselves believe that their existing audit methodologies are capable of detecting earnings management; therefore, there is no need for them to develop specific audit methodologies for dealing with earnings management. In Chapter 8, we also propose a new definition of earnings management.

5. Chapter 8 also contributes to the literature on the definition of audit quality, the measure of audit quality and factors that influence audit quality by exploring the views of the auditors and other stakeholders of the audits in relation to these issues. In this chapter, we propose a new definition of audit quality and identify factors that influence audit quality. Chapter 8 also reports evidence that big firms may have

different levels of audit quality and that mid-tier audit firms see their audit quality as the same level as that of big firms.

6. This study also adds to the literature on the extent to which institutional factors influence audit quality. Chapter 7 finds that a country's level of investor protection impacts audit quality. However, its findings show that the higher the level of investor protection the country has, the more audit firms can tolerate earnings management. In Chapter 9, five institutional factors identified by the interviewees are selected to test whether they impact audit quality using the probit model. These factors are the language of the accounting standards, an independent audit regulator, the number of registrant audit firms, an accounting Act and ISQC1. In addition, factors such as the legal system, Islamic accounting practice, corruption and corporate governance are also tested using the probit model. We find that the legal system and corporate governance are important factors in promoting audit quality at a national level.

1.7 ANALYTICAL PROPOSITIONS AND HYPOTHESES

In order to test the relationship between earnings management and audit quality and to observe the impact of interesting factors on audit quality, two main analytical propositions and hypotheses are developed as follows.

ANALYTICAL PROPOSITION 1:
This proposition is to test the general belief that a big firm has higher audit quality than a non-big firm. It also observes the influence of the level of investor protection, switching audit firm type and long audit firm tenure on audit quality. The hypotheses are constructed as follows:

Hypothesis$_0$ 1: A big audit firm, which is perceived to be a higher rank of audit firm, would have a higher audit quality than a non-big firm.

Hypothesis$_0$ 2: Audit firms from a country which has a higher rank of investor protection would have a higher audit quality than those from a country which has a lower rank of investor protection.

Hypothesis$_0$ 3: If there is no difference in audit quality within the same type of audit firm, audit firm type tenure will not affect audit quality.

Hypothesis$_0$ 4: If there is the difference in audit quality between types of audit big /non-big firm and a big firm is of higher audit quality than a non-big firm, change in audit firm type will impact audit quality. The change from a non-big firm to a big firm will improve audit quality; on the other hand, the change from a big firm to a non-big firm will decrease audit quality.

ANALYTICAL PROPOSITION 2:

This proposition is to test the extent to which five factors identified by the interviewees influence audit quality. The hypotheses are developed as follows:

Hypothesis$_0$ 5: Audit firms from a country where the language of the accounting standards is English would have a higher audit quality than those from a country where the language of the accounting standards is not English.

Hypothesis$_0$ 6: An audit firm would have a higher audit quality after an independent audit regulator, who performs the audit firm inspection, exists. The independent audit regulator is defined as the regulator who is member of the International Forum of Independent Audit Regulators (IFIAR).

Hypothesis$_0$ 7: Audit firms from a country with a low proportion of listed companies to registrant audit firms would have a higher audit quality than those from a country with a high proportion of listed companies to registrant audit firms.

Hypothesis$_0$ 8: An audit firm would have a higher audit quality after an accounting Act, which legislatively imposed the accounting standards, is effective.

Hypothesis$_0$ 9: An audit firm would have a higher audit quality after ISQC1 was adopted.

1.8 OUTLINE OF THE THESIS

This thesis comprises ten chapters. Chapters 1 and 2 are the introduction to the thesis. Chapters 3,4 and 5 provide literature reviews and empirical evidence on earnings

management and audit quality. Chapter 6 shows how our methodology is developed. Chapters 7,8 and 9 describe the investigations carried out by the thesis. Chapters 7 and 9 provide quantitative evidence of factors that influence audit quality. This quantitative evidence is inferred from the results of the probit model tests. Chapter 8 provides qualitative evidence for the interviewees' understanding of earnings management and audit quality, especially evidence that expands the findings of Chapter 7 and evidence for factors that impacts audit quality. In Chapter 9, some factors identified by the interviewees in Chapter 8 are chosen to test their influence on audit quality. These factors are then introduced into the probit model which is previously used in Chapter 7. Chapter 10 presents the conclusion of the study. An outline of each chapter is presented below.

CHAPTER 2: BACKGROUND INFORMATION ON SOUTHEAST ASIA

Chapter 2 provides background information on Indonesia, Malaysia, the Philippines, Thailand and Singapore. It gives an overview of these countries in terms of economic growth and stock market performance. A brief history and information on population, the legal and governmental system, the economy and information on the accounting environment of each country are provided.

CHAPTER 3: EARNINGS MANAGEMENT AND ACCRUALS MODELS

This chapter reviews the origin of earnings management and the existing definitions of earnings management proposed by previous studies. It also shows how to distinguish earnings management from fraud and how earnings management is associated with the conservative or aggressive accounting practice. The chapter summarises various motivations for income-decreasing and income-increasing earnings management. In this chapter, a proxy for earnings management is discussed and accruals models developed by empirical studies are documented. The chapter focuses on the models that are generally used by a large number of the studies on earnings management. It also discusses the results of the empirical studies that assessed and compared the performance of these accruals models.

CHAPTER 4: AUDIT QUALITY

Chapter 4 documents recent evidence from auditing and accounting studies with respect to audit quality. It begins with definitions of audit quality and the measures of audit quality that are found in previous studies. A summary of engagement, firm, and national factors tested in the previous studies is provided.

CHAPTER 5: EARNINGS MANAGEMENT AND AUDIT QUALITY

This chapter reviews auditing and earnings management. It also reviews the literature on the influences of investor protection, audit firm type and accounting environment on audit quality.

CHAPTER 6: METHODOLOGY

The methodology discussion covers how the mixed research approach of quantitative models and qualitative interviews is employed in this study. For quantitative models, this chapter shows the accruals model which is selected for this study's purposes, and also shows how the probit model is developed. For qualitative interviews, it describes how the interviews are conducted.

CHAPTER 7: HOW DO AUDIT FIRM TYPE AND INVESTOR PROTECTION INFLUENCE AUDIT QUALITY?

This chapter provides the results and the discussions of the tests on the first analytical proposition. The tests focus primarily on the influence of audit firm type and investor protection on audit quality. The results of the tests support the belief that big firms have higher audit quality than non-big firms. Interestingly, there is evidence that audit quality does not vary only according to type of audit big/non-big firm but also from firm to firm. Long audit firm type tenure impairs audit quality but the switching of an audit either from a non-big firm to a big firm or a big firm to a non-big firm improves audit quality. The results of this chapter also raise doubt that audit firms from a higher level of investor protection are more tolerant of discretionary accruals than those from a lower level of investor protection. This doubt is evidence that other national factors than a country's level of investor protection may influence audit quality.

CHAPTER 8: QUALITATIVE EVIDENCE ON EARNINGS MANAGEMENT AND AUDIT QUALITY

The results of the interviews with some key stakeholders of the audits from Malaysia, Singapore and Thailand are reported in this chapter. Discussions of six main interview questions and their follow-up questions are provided. The key findings of the interviews are that the language of the accounting standards, an independent audit regulator, a number of registrant audit firms, an accounting Act and ISQC1 are perceived to be key factors that help create a good environment for promoting audit quality. Interestingly, earnings

management is viewed differently from previous studies' definitions of earnings management.

CHAPTER 9: WHAT INFLUENCES AUDIT QUALITY?

Chapter 9 provides the results and the discussions of the tests on the second analytical proposition. In these tests, five factors identified by the interviewees in Chapter 8 and other factors such as the legal system, Islamic accounting practice, corruption and corporate governance are introduced into the probit model. The key findings of the tests are that a limited number of registrant audit firms and non-English accounting standards are not a constraint on promoting audit quality, despite the interviewees' worries about the negative consequences of these two factors. Among other additional institution variables, a common law tradition and good corporate governance are found to be more effective in promoting audit quality. However, low corruption is associated with impaired audit quality.

CHAPTER 10: CONCLUSION

This chapter arrives at the final conclusion of this thesis. Both quantitative and qualitative evidence from Southeast Asia support the belief that big firms are of higher audit quality than non-big firms. Quantitative evidence indicates that firm and engagement level factors have more influence on audit quality than national level factors and that mandatory audit firm rotation helps promote audit quality. On the other hand, qualitative evidence leads to this study's new definitions of earnings management and audit quality.

CHAPTER 2

BACKGROUND INFORMATION ON SOUTHEAST ASIA

2.1 INTRODUCTION

A large number of earnings management studies and auditing research studies have obtained evidence from the big stock markets in the United States and Europe; however, there are only a small number of studies on Southeast Asia. This thesis therefore broadens the evidence from this region. It focuses on five dominant stock markets: the Singapore Exchange, the Bursa Malaysia, the Indonesia SE, the Stock Exchange of Thailand and the Philippine SE. These stock markets are appealing for investors because of good stock market performance in the respective countries and the steady growth of their economies. It may also be the case that growth in these stock markets and economic circumstance may put pressure on listed companies in this region to engage more in earnings management.

In addition, Indonesia, Malaysia, the Philippines, Thailand and Singapore are of interest in the context of international studies. These five countries have a long history, diversification of population, differences in governments and regulation systems, multiple languages and differences in accounting and auditing environment. Importantly, Leuz, Nanda and Wysocki (2003) found that there are significantly different levels of investor protection among these countries. Singapore and Malaysia have a high level of investor protection and a low level of earnings management whilst Indonesia, Thailand and the Philippines have a low level of investor protection and a high level of earnings management. This means that the study of the association between earnings management and audit quality in these five countries is of interest, especially in the context of international comparison.

This chapter provides a summary of the economic and accounting environments of the five countries chosen for this study. The structure of this chapter is as follows. Sections 2.2 and 2.3 give an overview of economic growth and the stock market performance, respectively. In Section 2.4, a brief history, information on the population, government and economy of each country are provided. Section 2.5 is a summary of the accounting and audit environments in these five countries. Section 2.6 is the conclusion of this chapter.

2.2 OVERVIEW OF ECONOMIC GROWTH OF INDONESIA, MALAYSIA, THE PHILIPPINES, THAILAND AND SINGAPORE

Southeast Asia comprises eleven countries; Brunei Darussalam, Timor-Leste, Indonesia**,** Cambodia**,** Laos, Malaysia, Burma, the Philippines, Singapore, Thailand, and Vietnam. This region has a total population of approximately 608.3 million and covers an area of about 4.5 million square kilometres (The Central Inteligence Agency, 2011) Among these five selected countries, Indonesia is the largest country, based on population (251.0 million, with an area of 1.905 million Km^2). The Philippines (population 105.7 million, area 0.300 million Km^2); Thailand (population 67.5 million, area 0.513 million Km^2) and Malaysia (population 29.6 million, area 0.330 million Km^2) are the second, the third and the fourth in population size, respectively. Singapore is the smallest (population 5.5 million, area 1,000 Km^2) (The Central Intelligence Agency, 2014a). Figure 1 below shows the map of Southeast Asia.

Figure 1: Southeast Asia

Source: The Central Intelligence Agency (2014a)

Figure 2 below presents GDPs of Indonesia, Malaysia, the Philippines, Singapore and Thailand for the period 2000-2012. Singapore had the best economic performance whilst the remaining countries' economic growths were similar. In comparison to other countries, Indonesia seemed to be able to better stabilise its economy. Its economy suffered less damage from the economic crises in 2001, 2008, 2009 and 2011 when other countries' GDPs contracted. Unlike other countries where their economies recovered from 2011, Singapore continually struggled with its economic problems in 2012.

Figure 2: Real GDPs 2000-2012
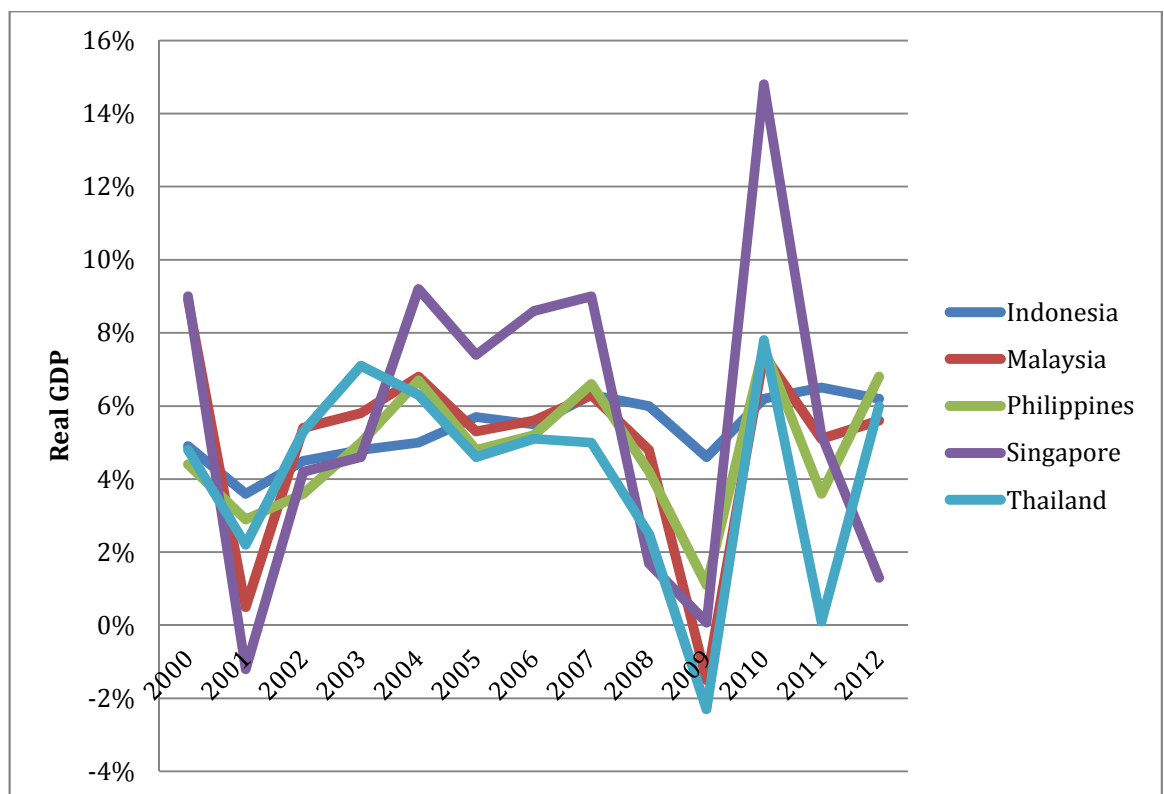
Source: The World Bank (2014)

In terms of GDP per capita, there is a big gap between GDP per capita of each country in this region. Singapore ($60,800) had the highest GDP per capita. As well as Singapore, Malaysia ($16,800) also had GDP per capita above the world's average ($12,500). Thailand ($9,500) presented GDP per capita slightly below the world's average. The other countries had GDP per capita below $5,000. (The Central Intelligence Agency, 2014a).

Growth in Southeast Asian economies and suddenly facing financial crises caused poor stock market performance of all countries. This may have contributed to listed companies' motivation for earnings management as earnings management can help them fight against

reductions in their stock prices resulting from suddenly reporting losses or earnings drops. The next section covers information on Southeast Asian stock market performance.

2.3 OVERVIEW OF STOCK MARKET PERFORMANCE

By comparison with the NYSE Euronext (US) ($14.1 trillion), the NASDAQ OMX ($4.6 trillion) and the Tokyo SE Group ($3.7 trillion) which are the top-three world biggest stock markets, Southeast Asian stock markets are small. As of December 2012, total domestic market capitalisation was around $2.3 trillion (The World Federation of Exchanges, 2014b). It comprises five dominant capital markets: the Singapore Exchange, the Bursa Malaysia, the Indonesia SE, the Stock Exchange of Thailand and the Philippine SE.

As of December 2012, the Singapore Exchange was the biggest in this region and had a domestic market capitalisation of about $765 billion. The Bursa Malaysia and the Indonesia SE had similar domestic market capitalisations that were worth about $467 billion and $428 billion, respectively. The Stock Exchange of Thailand and the Philippine SE were small stock markets with domestic market capitalisations of $390 billion and $229 billion, respectively. (The World Federation of Exchanges, 2014b)

The stock markets in this region have performed well in the past years. The changes in broad market indexes reported by the World Federation Exchange indicated that the Indonesia SE, the Philippine SE, and the Stock Exchange of Thailand, seemed to be the best performing markets. The Indonesia SE (2009: 87.0%, 2010: 46.1% and 2011: 3.2%), the Philippine SE (2010: 37.6%, 2011: 4.1% and 2012: 33.0%) and the Stock Exchange of Thailand (2010: 40.6%, 2011: -0.7% and 2012: 35.8%) were included in the top-ten best performing broad market indexes. (The World Federation of Exchanges, 2014a)

Figure 3: Price/earnings (P/E) Ratios and Market Yields as of December 2012
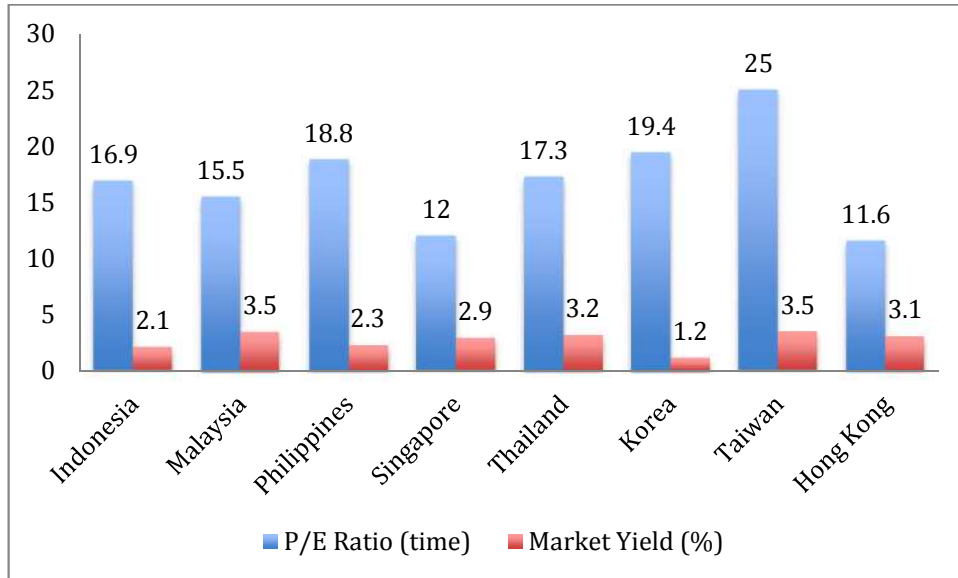
Source: The Stock Exchange of Thailand (2014)

Figure 3 shows that, as of December 2012, Southeast Asian Stock Exchanges presented a wide range of P/E ratios (12.0-18.8 times) and market yields (2.1%-3.5%). This performance was not much different from the Korean Exchange, the Taiwan SE Corp. and the Hong Kong Exchanges. The Philippine SE had the highest P/E ratio whilst the Singapore Exchange had the lowest P/E ratio. The Stock Exchange of Thailand, the Indonesia SE and the Bursa Malaysia presented medium P/E ratios. In terms of market yield, the Bursa Malaysia was the best yielding stock market. The Stock Exchange of Thailand and the Singapore SE had medium market yields. The Philippine SE and the Indonesia SE, which had high P/E ratios, had a low market yield. (The Stock Exchange of Thailand, 2014)

Sections 2.2 and 2.3 gave the overviews of economic growth and the stock market performance of Indonesia, Malaysia, the Philippines, Thailand and Singapore. Declining in economic growth and the stock market performance may be listed companies' motivation for engaging more in earnings management. As found by Leuz et al. (2003)[1], there are significantly different levels of investor protection and levels of earnings management amongst these five countries. Singapore and Malaysia have a high level of investor protection and a low level of earnings management while Indonesia, Thailand, and the Philippines have a low level of investor protection and a high level of earnings management.

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[1] For a detail of Leuz et al.'s (2003) study, see Chapter 5.

By additionally observing P/E ratio and market yield in Sections 2.3, Leuz et al.'s (2003) latter group has had high performance; however, their price to earnings ratios and yield rates are inconsistent. The Philippines and Indonesia show a good price to earnings ratios but a worse yield rate; but, by contrast, Thailand has a high price to earnings ratio and a high yield rate. Unlike Leuz et al.'s (2003) latter group, price to earnings ratios and yield rates of Leuz et al.'s (2003) former group are consistent. This unusual association between Leuz et al.'s (2003) level of investor protection and earnings management, and stock market performance may be a sign that listed companies in Indonesia, Thailand and the Philippines engage in earnings management to manipulate financial information which helps them gain benefits from the stock market.

Macroeconomic factors, for example a country's past history, diversification of population, legal system, official language, government system, social and economic circumstance and policies, may influence the economic growth of each country. They may even influence earnings management behaviours and the accounting and auditing environments in each country.

2.4 GENERAL INFORMATION

This section provides a brief overview of each selected country including information on each country's history, population, government and economy.

2.4.1 INDONESIA

Before declaring its independence in 1945, Indonesia had been under the control of the Dutch since the early 17th century, with a three year period of control by Japan (1942-1945). Even though Indonesia announced its independence in 1945, it took another four years for the country to attain complete freedom from the Netherlands. Indonesia is the largest country in the world that comprises many small islands, and is also the third largest Muslim community (86.1% of its total population). Poverty, education, corruption, economics and finance, politics, terrorism, and human rights are the big issues in Indonesia. Since it is comprised of many islands, its population comes from different ethnic groups; Javanese (40.6%), Sundanese (15%), Madurese (3.3%), Minangkabau (2.7%), Betawi (2.4%), Bugis (2.4%), Banten (2%), Banjar (1.7%), and other or unspecified (29.9%). The official language is "Bahasa Indonesia" which is a modified form of Malay. Indonesia is a

republic. Its legal system is the civil law system based on Roman-Dutch law and influenced by customary law. The currency is the Indonesian rupiah (IDR) (The Central Intelligence Agency, 2014b). Its average exchange rate is 9,430 IDR per one US dollar.[2]

Under the pressure of the economic downturn in 2009, the president introduced many policies to help Indonesia reduce the impacts of the financial crisis, for example, the use of Treasury bills, the revision of the tax and customs systems, and the improvement and development of the stock market. Until now, the government has focused on economic policy; however, this has been obstructed by corruption scandals and a high inflation rate. Indonesia's major industry is petroleum and natural gas. (The Central Inteligence Agency, 2011). Co-operation with China and India also led Indonesia to be less affected by the economic crisis in 2009. The on-going challenge for the Indonesian government is to improve the country's infrastructure. (The Central Intelligence Agency, 2014b)

2.4.2 MALAYSIA

The current area of Malaysia was a British colony in the late 18th and 19th centuries and under the control of Japan in 1942-1945. The Federation of Malaya was formed by the British in 1948 in order to rule this area, with it gaining independence in 1957. In 1963, Malaysia was a combination of many areas nearby e.g. Singapore, Sabah and Sarawak. Owing to its history, Malaysia faced a Communist rebellion and a confrontation with Indonesia, the Philippines and Singapore in the first years of independence. Malay (50.4%) and Chinese (23.7%) are the major groups of its population. The population is mainly Muslim (60.4%), with 19.2% of its population being Buddhist and 9.1% being Christian. Bahasa Malaysia is the official language but local people in many parts of Malaysia speak other languages. Malaysia is a constitutional monarchy. The legal system is a mixed system of English common law, Islamic law and customary law. The currency is ringgits (The Central Intelligence Agency, 2014b). Its average exchange rate is 3.60 ringgits per one US dollar.

Malaysia has expanded its industrial, service and tourism sectors, which helps it depend less on exports of raw materials. This has led Malaysia to become a leader in several

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[2] The average exchange rate is computed based on the last announcement of the exchange rate in each year during 2000-2011. The data was collected mainly from http://www.imf.org/external/np/fin/data/param_rms_mth.aspx. Missing data on the Philippine pesos was from http://www.bsp.gov.ph/statistics/statistics_online.asp whilst missing data on the Indonesian rupiah was from http://fxtop.com.

industries since the 1970s. The major export is oil and gas produced by Petronas, the state oil producer, which provides half of the government's income. Being dependent on only exporting oil, gas and electronic products is risky when world consumption goes down; therefore, the government has tried to boost local consumption and sought new investments in other sectors. In order to boost their investments, in 1970 the government launched a new policy which offered special benefits to ethnic Malay investors; however, this was opposed by Malay nationalists. With strong financial regulations and a strong central bank, Malaysia did not severely suffer from the world financial crisis. (The Central Inteligence Agency, 2011). As of January 2014, the Malaysian government has not succeeded in lessening its dependence on Petronas as its major source of revenue (The Central Intelligence Agency, 2014b).

2.4.3 THAILAND

Since its establishment in the mid-14th century, Thailand is the only country in this region which has never been controlled by another country. Due to the bloodless revolution in 1932, Thailand became a constitutional monarchy. Yellow-shirt and red-shirt protestors during 2006-2010 caused severe political, economic and social problems. The religious discrimination in four Malay-Muslim southern provinces has been a challenge for the government since 2004. Most of the population are Thai (75%) and Chinese (14%). Buddhists (94.6%) make up the majority of people. Thai is the official language although there are many local spoken languages. The legal system is based on the civil law system with influences of common law. The currency is the baht (The Central Intelligence Agency, 2014b). Its average exchange rate is 37.50 baht per one US dollar.

After the Asian Financial crisis in 1997-1998, Thailand experienced a steady growth during the following period of 2000-2008 because of strong internal factors (e.g. a well-developed infrastructure, a free-enterprise economy, and strong export industries) and well-employed policies. Machinery and electronic components, agricultural products, and jewellery are the main exports. Thailand is the world's second-largest tungsten producer and third-largest tin producer. The world financial crisis in 2008-2009 led Thailand to suffer from a significant reduction in exports, and in turn, a reduction of GDP. Protestors and an unstable government significantly affected the growth of the stock market and tourism industries. (The Central Inteligence Agency, 2011). In 2012, a reduction in exports led the government to boost domestic consumption and public

investment. It also implemented a policy on increasing the minimum wage and amended the tax rate of middle-income earners. Flooding interrupted the growth of the industrial sector in 2011 and 2012 (The Central Intelligence Agency, 2014b).

2.4.4 THE PHILIPPINES

After being under the control of Spain during the 16th - 19th centuries, the US in 1898-1946 (the Philippines was a self-governing commonwealth of the US from 1935 to1946), and Japan during the World War II in 1942, the Philippines declared its independence and became a republic in 1946. Political uncertainties and corruption issues have been detrimental to economic development. The Philippines have long struggled with fighting ethnic Moro groups in the southern area. The military tends to have an influence on the country. The Philippines comprise many ethnic groups: Tagalog (28.1%), Cebuano (13.1%), Ilocano (9%), Bisaya/Binisaya (7.6%), Hiligaynon Ilonggo (7.5%), Bikol (6%), Waray (3.4%), others (25.3%). Most of the population are Roman Catholic (80.9%). Filipino and English are the official languages; however, there are eight major dialects. The legal system is a mixed system of civil, common, Islamic and customary law. The currency is the Philippine peso (PHP) (The Central Intelligence Agency, 2014b). Its average exchange rate is 49.30 PHP per one US dollar.

With strong domestic consumption, low dependence on stock market and exports, and massive expansion of service sectors, the economy of the Philippines was not significantly affected by the world recession in 2008-2009. Even though the Philippines have experienced good economic growth, the imbalance between the population growth rate and the distribution of income has led to poverty issues. Hence, most of the state budget is spent on improving education, social welfare and the health system, and even distributing cash to people. The government has a strong ability to issue local and international debt but a weak tax system. The major exports are semiconductors and electronic products, transport equipment, garments, copper products, petroleum products, coconut oil, and fruits. (The Central Inteligence Agency, 2011). With the attempt to improve tax administration and expenditure management, the Philippines lessened its high debt level and the strictness of its budget. The Philippines' long-term challenges are to improve governance and legal systems and to build infrastructure. Foreign owners of businesses are still restricted in their rights to do some activities by the Constitution and other laws (The Central Intelligence Agency, 2014b).

2.4.5 SINGAPORE

Singapore attained its independence and became a parliamentary republic in 1965, after being a British colony since 1819 and part of Malaysia from 1963. Most of the population are Chinese (76.8%) and Malay (13.9%). Buddhists (42.5%) and Muslim (14.9%) are major religious groups. Mandarin, English and Malay are the official languages. The legal system is based on English common law. The currency is Singapore dollars (SGD) (The Central Intelligence Agency, 2014b). Its average exchange rate is 1.60 SGD per one US dollar.

Singapore became an important world port and a high per capita GDP country together with many developed countries in Western Europe because it did not face as many corruption scandals as other Southeast Asia countries. Consumer electronics, information technology products, pharmaceuticals and financial services sectors play important roles in pushing economic growth. Singapore aims to be Southeast Asia's financial and high-tech centre. Due to its heavy dependence on exports, Europe's economic downturn in 2011 and 2012 led to an economic recession in Singapore (The Central Intelligence Agency, 2014b).

A summary of the information on each selected country including their history, population, government and economy is presented in Table 1 in the next page.

Table 1: Summary of General Information

	Been under control of	Politic	Legal system	Ethnic group	Religion	Language
Indonesia	Dutch and Japan	Republic	The civil law system based on Roman-Dutch law and influenced by customary law	-Multi-group -Javanese (41%)	Muslim (86%)	Bahasa Indonesia
Malaysia	Great Britain and Japan	Constitutional monarchy	A mixed system of English common law, Islamic law and customary law	-Malay (50%) -Chinese (24%)	-Muslim (60%) -Buddhist (19%)	Malay
Thailand	-	Constitutional monarchy	The civil law (influenced by common law)	Thai (75%)	Buddhist (95%)	Thai
The Philippines	Spain, US and Japan	Republic	A mixed system of civil, common, Islamic and customary law	-Multi-group -Tagalog (28%)	Roman Catholic (81%)	Filipino and English
Singapore	Great Britain and Malaysia	Parliamentary Republic	English common law	-Chinese (77%)	- Buddhist (43%) -Muslim (15%)	Mandarin, English, and Malay

2.5 ACCOUNTING AND AUDITING ENVIRONMENT

This section includes brief information about the countries' accounting and auditing regulatory bodies and their adherence to international accounting and auditing standards. The information mainly focuses on recent changes in institutional factors during 2000-2011.

2.5.1 INDONESIA

Previously Indonesia had two stock exchanges, the Jakarta Stock Exchange (JSX) and the Surabaya Stock Exchange (SSX). In 2007, these two stock exchanges were merged and became the Indonesia Stock Exchange (IDX). (Saudanaran, 2005)

Accounting policy regulators comprise the Ministry of Finance (MOF), the Capital Market Supervisory Agency (BAPEPAM), which is Indonesia's capital market regulatory agency, the Indonesian Central Bank (BI) and the Indonesian Institute of Accounting (IAI), which is a private organisation. The Ministry of Finance is responsible for regulating and overseeing the accounting profession in Indonesia. Its responsibilities include issuing licenses to public accountants, reviewing auditors and audit firms and penalising ones who breach the standards and regulations. The responsibility of the IAI is to administer the accounting profession. (Saudanaran, 2005)

The IAI has the responsibility of issuing the Indonesian Financial Accounting Standards (PSAK). The Accounting Standards are a mix of IAS (International Accounting Standards), US GAAP (United States Generally Accepted Accounting Principles) and Indonesian standards. The majority of auditing standards are based on US AICPA (American Institute of Certified Public Accountants). Accounting standards are not legislative. According to ROSC (Report on the Observance of Standards and Codes), although Indonesia has had an action plan to converge all PSAK with IFRS (International Financial Reporting Standards) since ROSC's 2005 accounting and auditing review, the delay in translating the IFRS to the Indonesian language is one reason that has put the convergence progress behind schedule. The plan to fully adopt IFRSs was postponed to 1 January, 2012. (The World Bank Group, 2013). From 1 January, 2012 onwards, all PSAKs have been aligned with

IFRSs, which have been effective from 1 January, 2009, but there are still some modifications in the adoptions of IFRSs (PricewaterhouseCoopers, 2012).

The Indonesian Institute of Public Accountants (IAPI) was appointed to be the auditing standard setter in February 2008. Indonesian Public Accountant Professional Standards (SPAP) are set by the Audit Standards Committee of IAPI. Existing local auditing standards are still needed to align with ISA. The new professional standards that have been effective from 1 July, 2012, are translated from ISA. (The World Bank Group, 2013)

The Centre for Supervision of Accountants and Appraiser Services (PPAJP) was established in 1992 (The Accountant and Appraiser Supervisory Center, 2013). It was set up by the MOF and is responsible for reviewing and inspecting auditors. This is to ensure that the auditors comply with auditing standards (The World Bank Group, 2013). PPAJP has been a member of the IFIAR[3] (International Forum of Independent Audit Regulators) since 2013.

The Capital Market Supervisory Agency (BAPEPAM) also oversees the auditors of listed companies and conducts the audit firms' quality control review. In addition, the IAPI itself also has a programme to review the compliance of audit firms with professional standards. (The World Bank Group, 2013).

Listed companies are required to comply with the rules and mandatory requirements of BAPEPAM, the MOF and the BI. Auditors of listed companies have to be registered with BAPEPAM. ROSC reported that as of January 2011 there were 168 audit firms registered with BAPEPAM, and 125 of them had one to three registered public accountants.

Shari'ah accounting plays an important role in Indonesia as well as other Muslim countries. Under Shari'ah accounting, there are different accounting treatments from GAAP, for example interest income is prohibited (Saudanaran, 2005). Corruption is still the biggest issue in Indonesia (Saudanaran, 2005; The Asian Corporate Governance Association, 2010; The Asian Corporate Governance Association, 2012).

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[3] The IFIAR was set up in September 2006, which aims to be the centre of global independent audit regulators. As of September 2013, there are 48 countries that have registered as its members, for example, Germany, the US, the UK, Japan and Korea. (The International Forum of Independent Audit Regulators, 2013)

The Decree of Ministry of Finance (17) 2008 and the Public Accountant Act (5) 2011 are the applicable regulations related to the accounting profession (The APEC Accounting Service Initiative, 2014). Although Indonesia mandated these two regulations, its accounting standards are still not a legislative requirement. There is mandatory three-year audit partner rotation and six-year audit firm rotation for listed companies. Meanwhile there is mandatory five-year rotation of both audit partners and audit firms for banks. The IFAC requires only seven-year audit partner rotation.

2.5.2 MALAYSIA

BURSA MALAYSIA (BM) is the capital market of Malaysia and is overseen by the Malaysian Securities Committee (SC) (Saudanaran, 2005). Accounting regulatory bodies comprise the Ministry of Finance, the Bank Negara Malaysia, the Companies Commission of Malaysia (SSM), the Securities Commission and the Malaysian Institute of Accountants (MIA). Auditors must be licensed by the Ministry of Finance. The Bank of Negara Malaysia takes responsibility for controlling and monitoring companies in the financial sector. The SSM is the regulatory authority for all companies; meanwhile, the SC is the regulatory authority for listed companies. The MIA is responsible for administering accountants and auditors. (The World Bank Group, 2013)

The implementation of Financial Reporting Standards (Malaysia) (FRS) is under the MASB's responsibility (The Malaysian Accounting Standards Board, 2014a). Accounting standards are legislated for by sections 7 and 28 of the Financial Reporting Act (1997) (The Malaysian Accounting Standards Board, 2014b). Since 2006, Malaysia has converged FRS with IFRS and from 2012 onwards, FRS is word for word the same as IFRS. (The World Bank Group, 2013). However the MASB is willing to maintain some differences between IFRS and FRS issued before 2012 (The IFRS Foundation and the IASB, 2014). Auditing standards are mandated by the MIA By-Laws and from 1 January, 2010 onwards, Malaysia has adopted an unmodified version of ISAs. (The World Bank Group, 2013)

On 1 April, 2010, the Audit Oversight Board (AOB) was established as part of the SC and became a member of IFIAR. Its responsibility is to oversee auditors of listed companies. The auditors of listed companies have to be registered with AOB and as of 30 November,

2011, the number of registered audit firms was 76. The AOB completed FY 2010 and FY 2011 audit firm inspections. (The World Bank Group, 2013). As of March 2014, the number of registered audit firms was 63 (The Securities Commission Malaysia, 2014).

There is mandatory five-year audit partner rotation and the cooling-off period is two years (The World Bank Group, 2013). ISQC1 (International Standard on Quality Control 1) has been effective since 1 January 2010 (The Malaysian Institute of Accountants, 2013).

As in other Muslim countries, Shari'ah accounting plays an important role in Malaysia. Corruption is still the biggest issue in Malaysia (Saudanaran, 2005). According to ACGA (Asian Corporate Governance Association), window dressing, insider trading and market manipulation still tarnish the reputation of the Malaysian stock market.

2.5.3 THAILAND

The Stock Exchange of Thailand (SET) is the capital market of Thailand and is regulated by the Securities and Exchange Commission (SEC) (Saudanaran, 2005). Accounting policy regulators and standard-setters comprise the SEC and the Federation of Accounting Professions (FAP) (The World Bank Group, 2013).

Auditors of listed companies must be approved by the SEC. As of 2011, there were 27 audit firms registered with the SEC. The SEC also monitors and enforces activities on listed companies and registered auditors. The FAP is responsible for issuing licenses to CPAs, administering the accounting profession and setting accounting and auditing standards. Under the Accounting Act B.E. 2543 (2000), the Thai Accounting Standards are legislative. By the Accounting Professions Act B.E. 2547 (2004), accounting, auditing and ethically applicable standards are legislative and all members of the FAP must comply with these standards. (The World Bank Group, 2013). As of 2013, the number of registered audit firms was 26.[4]

According to ROSC, the process of converging TAS (Thai Accounting Standards) with IFRS is slow and takes about one and half years before the implementation. The

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[4] This data was provided by the person from the Accounting Supervision Department of the Thailand Securities and Exchange Commission.

translation from English into Thai is a challenging task. Although there is a great effort to make Thai Standard on Auditing (TSA) be in line with ISA, there are still gaps between them because of the difficulty in translating the standards. (The World Bank Group, 2013). Since 2011, TSA in the Thai language is based on IFRS issued in 2009, except for IASs 4, 7, 9, 32, 39 and 41; therefore, some local accounting standards remains effective (The IFRS Foundation and the IASB, 2014).

The FAP has a programme to review auditors' working papers in order to assess the quality of audits. In 2010, the SEC established the SEC Accounting Supervision Department, which has responsibility for inspecting registered audit firms' quality and is a member of IFIAR. As of 2013, it completed the audit firm inspections for the period 1 October, 2010-31 December, 2011. (The World Bank Group, 2013)

ISQC1 has been in force since 1 January 2014 (The Federation of Accounting Professions, 2013). The SEC requires listed companies to rotate auditors every five years (The World Bank Group, 2013).

2.5.4 THE PHILIPPINES

The Philippines Stock Market (PSE) is the capital market of the Philippines and is regulated by the Securities and Exchange Commission (SEC) (Saudanaran, 2005). The SEC, the Board of Accountancy (BOA) and the Philippines Institute of Certified Public Accountants (PICPA) have key roles as standard-setters and regulators of the accounting and auditing professions (The World Bank Group, 2013).

CPAs are licensed by the PICPA. Additionally, auditors of listed companies must be accredited by the SEC. As of 2011, there were 131 audit firms registered with the SEC. The SEC also monitors and enforces activities on listed companies. The BOA is in charge of professional regulation. Accounting standards issued by the Accounting Standards Council (ASC) and auditing standards issued by the Auditing Standards and Practices (ASPC) become legislative once they get the approval of the BOA. The ASC and the ASPC are formed by the PICPA. (The World Bank Group, 2013). Sec 9 of the Philippines Accountancy Act empowers the BOA to enforce accounting and auditing standards (The Philippines Institute of Certified Public Accountants, 2014).

The Philippines started to replace US-based accounting standards with IAS in 1996. English is the official language; therefore, there is no need for the translation of IAS. IAS and IFRS have been adapted with minor modifications. By 2005, most of IAS and IFRS were fully adopted. The PICPA started to adopt ISA in 2001 and fully adopted all of the standards in 2005. (The World Bank Group, 2013). The Philippines Standards on Quality Control has been effective from 1 January, 2010 onwards (The Audit And Assurance Standard Council, 2013).

In 2004, a Quality Review Committee (QRC) was set up with the responsibility to monitor quality of auditors and audit firms. The SEC has a mandatory five-year audit partner rotation. (The World Bank Group, 2013)

ACGA believes that the Philippines' major problem is a powerful lobby group of large companies, that want to postpone the implementation of the standards. It failed to establish the independent audit oversight board because of the small audit firms' lobby. In 2006, ROSC also suggested that the Philippines should establish a public oversight body, which takes responsibility for quality control review of auditors and audit firms. However, there is still no independent audit regulator in the Philippines.

2.5.5 SINGAPORE

The Singapore Exchange (SGX) is the capital market of Singapore, which resulted from the merger between the Stock Exchange of Singapore (SES) and the Singapore International Monetary Exchange (SIMEX) in 1999 (Saudanaran, 2005). 40% of listed companies are located outside Singapore, for example Japan, India and China. The SGX is a self-regulating organisation (The Singapore Exchange, 2013).

The Monetary Authority of Singapore (MAS), the SGX and the Securities Industry Council (SIC) have significant influence on the imposition of accounting regulations and standards. Listed companies in the financial sector are regulated and monitored by the MAS whilst the SGX has authority to regulate and monitor those in other sectors. Take-overs and mergers are required to comply with the SIC's code. (Saudanaran, 2005)

The Institute of Singapore Chartered Accountants (ISCA), formerly known as the Institute of Certified Public Accountants of Singapore (ICPAS), is the national accountancy body and has major responsibility for developing the accounting profession. Before 2002, the responsibility for setting accounting standards also lay with the ICPAS. However, this responsibility was transferred to the Council on Corporate Disclosure and Governance (CCDG) during 2002-2007. From December 2007 onwards, the Accounting Standards Act established the Accounting Standards Council (ASC), which replaced the CCDG. (Deloitte Touche Tohmatsu Limited, 2013)

Under section 8 of the Accounting Standards Act, the accounting standards are legislative (The Attorney-General's Chambers, 2014). The Singapore Financial Reporting Standards (SFRS) are mostly identical to IFRS; however, there are still minimal gaps between some of them. (Deloitte Touche Tohmatsu Limited, 2013). Even though Singapore began to converge IFRS into the SFRS in 2002, as of July 2013, there is still no time frame for completing the convergence of all IFRS into SFRS (The IFRS Foundation and the IASB, 2014).

The Accounting and Corporate Regulatory Authority (ACRA) was formed in 2004 and has become the regulator of business entities and public accountants. It is also a founding member of IFIAR and has responsibility for licensing public accountants and conducting audit firm quality inspections. (The Accounting and Corporate Regulatory Authority, 2013a).

The ISCA has responsibility for issuing the Singapore Standards on Auditing (SSA) and the Statement of Audit Practice (SAP). SSAs are identical with ISAs but the SAPs are used only for Singapore. The ISCA's audit firm inspection is on a voluntary basis. (The Institute of Singapore Chartered Accountants, 2013a)

In September 2011, the SGX required that auditors of listed companies must be registered with ACRA or other recognised independent regulators (e.g. IFAIR) (The Asian Corporate Governance Association, 2012). Listed companies have had to rotate audit partners once every five years since 2004 (The Institute of Singapore Chartered Accountants, 2013b).

The Singaporean Standards on Quality Control 1 (SSQC1): *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and other Assurance and Related Services Engagements*, which is identical to ISQC1 has been effective from 15 December, 2009 onwards (The Accounting and Corporate Regulatory Authority, 2013b).

Table 2: Summary of Accounting and Auditing Environment

	Indonesia	The Philippines	Malaysia	Thailand	Singapore
Accounting rules are legislative	Even though the Public Accountant Act 2011 was mandated in May 2011, the accounting standards are still not legislatively mandated.	Yes, the Philippines Accountancy Act 2004	Yes, the Financial Reporting Act 1997	Yes, the Accounting Act B.E. 2543 (2000)	Yes, the Accounting Standards Act 2007
IFRSs and ISAs	Indonesian	English	English	Thai	English
	Since 2012, all PSAKs have been aligned with IFRSs by having some modifications.	IAS and IFRS have been adapted with minor modifications. By 2005, most of IAS and IFRS were fully adopted.	IFRS were fully adopted in 2012. From 2012 onwards, FRS is word for word of IFRS. There remain some differences between IFRS and FRS issued before 2012.	Since 2011, TSA in the Thai language is based on IFRS issued in 2009 except for IASs 4, 7, 9, 32, 39 and 41; therefore, some local accounting standards remain effective.	SFRS are mostly identical to IFRS; however, there still have been minimal gaps between some of them. As of July 2013, there is still no time frame for completing the convergent of all IFRS into SFRS.
	There remain differences between the existing local auditing standards with ISA. The new professional standards that have been effective from 1 July, 2012, are translated from ISA.	ISAs started to be adopted in 2001 and were fully adopted in 2005.	From 1 January, 2010 onwards, Malaysia has adopted an unmodified version of ISAs.	There are still gaps between TSA and ISA because of the difficulty in translating the standards.	The Standards on Auditing (SSA) is identical with ISA but the Statement of Audit Practice (SAP) is used only for Singapore.
Independent audit regulator registered with IFIAR.	Yes, PPAJP has been a member of IFIAR since 2013.	No	Yes, its establishment was in 2010.	Yes, its establishment was in 2010.	Yes, its establishment was in 2004.
ISCQ1	1 January 2010	1 January 2010	1 January 2010	1 January 2014	15 December 2009
Audit firm rotation	3-year audit partner rotation and 6-year audit firm rotation for listed companies and 5-year rotation of both audit partner and audit firm for banks	Rotation of audit partners once every 5 years	Rotation of audit partners once every 5 years	Rotation of audit partners once every 5 years	Rotation of audit partners once every 5 years

Table 2 in the previous page shows a summary of the accounting and auditing environment in each country. All of the countries' accounting standards except for Indonesia are legislated. The translation of IFRSs and ISAs from English to their official languages led Indonesia and Thailand to delay the implementation of these standards. All countries except for the Philippines have an independent audit regulator, which has responsibility for conducting audit firm inspection with regard to their quality control system. Thailand is the only country in this region that has delayed the implementation of ISQC1. All countries except for Indonesia require listed companies to rotate audit partner once every five years. Indonesia has both mandatory audit partner rotation and audit firm rotation. Corruption is a big issue in all countries except for Singapore. According to Transparency International, the rank of corruption perception index 2012 from the lowest level to the highest level is Singapore (score: 86/100, rank: 5/177), Malaysia (50/100, 53/177), the Philippines (36/100, 94/177), Thailand (35/100, 102/177) and Indonesia (32/100, 114/177), respectively. In addition, Shari'ah accounting plays an important role in Malaysia and Indonesia.

2.6 SUMMARY

The Southeast Asian stock markets are small and comprise five dominant capital markets– the Singapore Exchange, the Bursa Malaysia, the Indonesia SE, the Stock Exchange of Thailand and the Philippine SE. As a result of economic growth and a good stock market performance during 2000-2012, these five stock markets have attracted a lot of interest from investors. However, in 2001, 2008, 2009 and 2011, the financial crises led to slow growth of the Southeast Asian economy, and in turn, poor stock market performance. Growth in the stock markets and unstable economies may put pressure on listed companies in these stock markets to engage more in earnings management. This claim is drawn from previous evidence that the financial crisis in 1998-1999 affected Southeast Asian listed companies' motivation to engage in earnings management (Charoenwong and Jiraporn, 2009; Darrough, Pourjalali and Saudagaran, 1998; Chia, Lapsley and Lee, 2007; Saleh and Ahmed, 2005).

Indonesia, Malaysia, the Philippines, Thailand and Singapore have different levels of investor protection and earnings management. Thus, these five countries are of interest to the author in studying the association between earnings management and audit quality, especially the influence of macroeconomic factors and the accounting and auditing environments on audit quality. There is also doubt as to whether these factors significantly

influence the perspectives of some key stakeholders of the audits on earnings management and audit quality.

The next three chapters will provide a review of literature and empirical evidence that is associated with earnings management and audit quality. Chapter 3 will discuss the concept of earnings management and also focus on the accruals models which have been widely used to detect earnings management. Chapter 4 will summarise the concept of audit quality and Chapter 5 will link the concept of earnings management and the concept of audit quality together.

CHAPTER 3

EARNINGS MANAGEMENT AND ACCRUALS MODELS

3.1 INTRODUCTION

Earnings management began to receive researchers' attention in the late 1950s. First the different terminologies relating to earnings management were defined, e.g. creative accounting (Park, 1958) and income smoothing (Copeland, 1968; Trueman and Titman, 1988). Later, definitions of earnings management itself were developed by many studies (Beneish, 2001; Healy and Wahlen, 1999; Ronen and Yaari, 2008; Schipper, 1989). Although there are a large number of previous studies that have attempted to define the term *earnings management*, doubts as to what earnings management is and how it is different from other terms, for example fraud, creative accounting, smoothing income and accruals management, still remain. There are also questions about whether earnings management is illegal or acceptable, whether it is allowed by generally accepted accounting principles (GAAP) and how to capture earnings management. This chapter aims to address these questions by providing a clearer understanding of earnings management and detailing methods that were used to capture earnings management by previous studies.

This chapter proceeds as follows. Section 3.2 describes the origin of the term earnings management. Section 3.3 provides the definitions of earnings management proposed by Schipper (1989) and Healy and Wahlen (1999) which have been widely used in studies of earnings management. It continues with Dechow and Skinner's (2000) concept of how to distinguish earnings management from fraud. In addition this section discusses how earnings management is associated with conservative accounting or aggressive accounting. It also explains the forms and techniques of earnings management. Section 3.4 covers previous evidence of managements' motivations for earnings management and how these motivations are associated with the direction of earnings management. Sections 3.5 and 3.6 continue with discussions on a proxy for earnings management and methods for detecting discretionary accruals, repectively. Section 3.7 provides the detail of extant accruals models that have been generally used in empirical studies of earnings

management. Section 3.8 presents the results of previous studies that tested and compared the performances of the accruals models. Section 3.9 gives a summary of this chapter.

3.2 THE ORIGIN OF THE TERM EARNINGS MANAGEMENT

Accounting reports the financial effects of past events or transactions on an entity's financial position and performance for a specific period of time. This financial information is useful to users for predicting the entity's future cash flows. Hence, accounting is mainly about classification, recognition and measurement of these past events or transactions which require accountants' decisions. Decision-making on accounting choices of the classification, recognition and measurement leads scholars to focus on the concepts of creative accounting and smoothing income.

Hepworth (1953) developed the concept of smoothing income. He pointed out that one of firms' motivations for smoothing income is to save their taxes, especially when a reduction in the tax rate will take effect or when an addition or removal of types of income taxation will be announced by a revenue department. Smoothing income can be done by shifting revenue between periods, deferring costs and expenses, recording intangible assets that have no limited useful life or selecting different types of inventory accounting. Later, Park (1958) spotlighted the concept of creative accounting. Park (1958) believed that creative accounting is vitally important for the accountancy profession to produce an innovation in measuring firms' financial position and performance and in presenting financial information. Importantly, creative accounting must be within the confines of GAAP.

Since the middle of the 20th century, researchers studied income smoothing. The connotation of the word *income smoothing* is management's attempt to fight against fluctuations in reported earnings (Beattie, Brown, Ewers, John, Manson, Thomas and Turner, 1994; Beidleman, 1973; Copeland, 1968; Moses, 1987). Gordon (1964) underscored that a manager has a strong incentive to smooth income so long as his/her compensation, job stability and shareholders' satisfaction depend on the earnings growth rate. Researchers have conducted studies on smoothing income through the classification of extraordinary items (Ronen and Sadan, 1975; Beattie et al., 1994), smoothing income through accounting changes (Moses, 1987), smoothing income through loan loss provision (Greenawalt and Joseph, 1988; Ma, 1988) and smoothing income through write-offs of bad loans (Ma, 1988). Some of them also define income smoothing as one form of earnings management (Beattie et al., 1994; Dechow and Skinner, 2002; Lang, Raedy and Wilson,

2006; Leuz et al., 2003; Schipper, 1989). Recent studies on income smoothing are conducted by many researchers, for instance Sun (2011) and Dou, Hope and Thomas (2013).

The use of accruals to manage reported earnings was observed by Healy (1985). He produced the seminal work which examined the relation between management bonus plans and their accounting decisions. The concept used by Healy (1985) has been widely used by other studies of accruals manipulation and earnings management since the mid-1980s, for example the studies of Sweeney (1994) and DeFond and Jiambalvo (1994). Sweeney (1994) investigated the use of income-increasing discretionary accounting changes and early adoptions of income-increasing mandatory accounting changes. These two accounting treatments are designed to help financially distressed firms that are close to violating restrictions of their debt agreements report increases in earnings. DeFond and Jiambalvo (1994) examined the use of income-increasing abnormal accruals and working capital accruals in the year before and the year of a default among the managements of firms that violated their debt agreements.

The author believes that creative accounting, income smoothing and accruals management are the origin of earnings management. The next section discusses the concept of earnings management.

3.3 WHAT IS EARNINGS MANAGEMENT?

The most widely used definitions of earnings management are Schipper's (1989) and Healy and Wahlen's (1999). Their definitions indicate that a management's incentive to perform earnings management, its intent to influence reported earnings and its use of judgement in the financial reporting process are the main criteria for defining an activity as earnings management. However, these two definitions do not indicate how earnings management is associated with GAAP, especially whether it is allowed by GAAP. Therefore, it is difficult to distinguish earnings management from a misstatement resulting from error and/or fraud.

Dechow and Skinner (2000) discussed the concept of earnings management and how it can be distinguished from fraud. They considered that earnings management is the use of accounting choices which are allowed by GAAP; conversely, fraudulent accounting is the use of accounting which does not comply with GAAP. To manage earnings, management

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sometimes has to alter real events or to adopt aggressive or conservative accounting. These, in turn, lead reported earnings not to be resulted from neutral treatment. Adopting conservative or aggressive accounting practices through purposely selecting accounting estimations and assumptions is easier than altering real events because, as remarked by Goncharov (2005), operating earnings management is more costly than accounting earnings management since it affects real cash flows. Dechow and Skinner's (2000) discussion of the concept of earnings management is summarised in Figure 4 below.

Figure 4: The Distinction Between Fraud and Earnings Management

	Accounting Choices	"Real" Cash Flow Choices
	Within GAAP	
"Conservative" Accounting	Overly aggressive recognition of provisions or reserves	Delaying sales
	Overvaluation of acquired in-process R&D in purchase acquisitions	Accelerating R&D or advertising expenditure
	Overstatement of restructuring charges and asset write-offs	
"Neutral" Earnings	Earnings that result from a neutral operation of the process	
"Aggressive" Accounting	Understatement of the provision for bad debts	Postponing R&D or advertising expenditure
	Drawing down provisions or reserves in an overly aggressive manner	Accelerating sales
	Violates GAAP	
"Fraudulent" Accounting	Recording sales before they are "realisable"	
	Recording fictitious sales	
	Backdating sales invoices	
	Overstating inventory by recording fictitious inventory	

Source: Dechow and Skinner (2000)

Earnings management is the use of aggressive or conservative accounting to manage reported earnings (Dechow and Skinner, 2000). Bushman and Piotroski (2006) defined conservative accounting as the speed of good news (gain) recognition and the speed of bad news (loss) recognition. In a general sense, it occurs when bad news is quickly recognised while good news is slowly recognised: these help reduce reported earnings. Hackenbrack and Nelson (1996) believed that, in the absence of precise standards, an aggressive reporting method is used to take advantage of a specific financial circumstance with the general aim of reporting a healthy profit and/or strong liquidity. Desai, Hogan and Wilkins (2006) labelled aggressive accounting as an aggressive interpretation of GAAP. Burns and Kedia (2006) believed that adopting an aggressive accounting choice is influenced by a

management's compensation scheme and is a cause of restatement of previous years' financial statements.

Earnings management techniques are divided into real operating decisions and decision-making on financial reporting (Schipper, 1989; Peasnell, Pope and Young, 2000; and Ewert and Wagenhofer, 2005). Schipper (1989) pointed out that real earnings management is designed to manage the timing of decision-making on a company's investments and production while accounting earnings management is designed to select accounting techniques allowed by GAAP. Ewert and Wagenhofer (2005) explained that one form of earnings management is the management's interpretation of accounting standards with the intent to make existing standards apply to existing accounting events and transactions, and/or with the intent to partially shift earnings between periods. In terms of real earnings management, the manager is required to organise transactions or alter the timing of transactions to help him/her transform bad news into good news.

Earnings management comes in two general forms, income-increasing and income-decreasing earnings management. These depend on the management's purpose in managing earnings. Aggressive accounting is defined as income-increasing earnings management because its major aim is to increase reported earnings, but, by contrast, conservative accounting is defined as income-decreasing earnings management because it intends to reduce reported earnings. The decision to use income-increasing or income-decreasing earnings management hinges on a management's incentives to manage reported earnings.

Earnings management therefore means a management's intention not to report neutral operating activities by influencing reported earnings through the exercise of judgement on accounting choices, and with an aim to achieve a particular purpose (Healy and Wahlen, 1999; Schipper, 1989). The direction of earnings management is influenced by the management's incentives. This will be discussed in the following section.

3.4 MANAGEMENT INCENTIVES TO ENGAGE IN EARNINGS MANAGEMENT AND THEIR ASSOCIATIONS WITH THE DIRECTIONS OF EARNINGS MANAGEMENT

Empirical studies have attempted to identify the association between managements' incentives to employ earnings management and patterns of managing earnings. Most of them document the fact that managements use income-decreasing or income-increasing earnings management through accruals management to achieve high rewards (Guidry, Leone and Rock, 1999; Healy, 1985), take advantage of specific circumstances (Erickson and Wang, 1999; Guenther, 1994; Jones, 1991; Perry and Williams, 1994; Pourciau, 1993), report favourable profits (Burgstahler and Dichev, 1997), achieve analysts' forecasts (Matsutomo, 2002; Abarbanell and Lehavy, 2002; Dhaliwal, Gleason and Mills, 2004; Burgstahler and Eames, 2006) and achieve debt covenant agreements (Jaggi and Lee, 2002).

3.4.1 INCOME-INCREASING EARNINGS MANAGEMENT

Achieving analysts' forecasts, avoiding reporting losses and earnings drops, increasing in stock prices and reducing the number of shares needed in stock-to-stock mergers are example motivations for income-increasing earnings management.

3.4.1.1 ACHIEVING ANALYSTS' EARNINGS FORECASTS

Earnings forecasts by analysts are one of the key benchmarks which investors use to evaluate listed companies' performances. Therefore, reporting earnings that meet or beat the analysts' forecasts is one of the key motivations behind earnings management. According to Matsutomo (2002), institutional investors have a strong reaction against an earnings shock. Managers of companies with a high percentage of shares held by institutions are therefore under greater pressure to achieve earnings targets. The greater dependence on implicit claims from a large group of stakeholders (e.g. customers, employees, suppliers) that companies have, the more companies employ income-increasing earnings management to maintain their financial image. This occurs especially when press reports on the difference between real earnings and analysts' forecasts are available. Owing to the large group of stakeholders and institutional investors, managers may also be

under more pressure to be concerned with the value of reported earnings that are relevant to predict future cash flows and firm value.

There is consistent evidence on this from Abarbanell and Lehavy (2002), Dhaliwal, Gleason and Mills (2004) and Burgstahler and Eames (2006). Abarbanell and Lehavy (2002) showed that, in comparison to firms with analyst stock recommendations to sell or hold, firms with analyst stock recommendations to buy engage more in income-increasing earnings management that helps them just to achieve or slightly exceed the analysts' forecasts.

To beat analysts' forecasts, some accounts are manipulated. Dhaliwal et al. (2004) provided evidence that the tax expense account, which is the last item before earnings are reported, could be used to manage earnings to meet analysts' forecasts. When earnings before taxes are below analysts' forecasts, companies reduce the effective tax rate in the last quarter. Burgstahler and Eames (2006) found that managements engage in income-increasing earnings management by both cash flow and accruals management in order to achieve or slightly exceed analysts' earnings forecasts.

However, Degeorge, Patel and Zeckhauser (1999) indicated that, to manage earnings, managements give the last priority to analysts' forecasts whilst the first and the second priorities are to report a profit and not to report the current quarter's profits below the profits of four quarters ago, respectively.

Reporting earnings below forecasts may be one major cause of a reduction in stock prices, management turnover and loss of a firm's image. Managements therefore have a strong incentive to manage earnings upwards to meet or exceed the forecasts. To stabilise his stock price, a manager also needs to avoid reporting losses or earnings drops as well as to meet analysts' forecasts. Otherwise an unexpected reduction in the stock price is inevitable.

3.4.1.2 AVOIDING REPORTING LOSSES OR EARNINGS DROPS

Reporting losses or earnings drops might lead to a listed company being faced with a sudden reduction in its stock price, which, in turn, decreases the company's value. In order to avoid reporting losses or earnings drops, the management of the company may deliberately report favourable earnings numbers. Burgstahler and Dichev (1997) reported

that 8% to 12% of the samples with a small drop of pre-managed earnings managed to report increasing earnings. It is interesting that 30% to 44% of them with small negative pre-managed earnings managed to report positive earnings. Park and Shin (2004) and Peasnell, Pope and Young (2005) suspected that some of their sample managed earnings upwards in order to help them not to report losses and earnings reductions. Income-increasing abnormal accruals are used to manage earnings upwards (Peasnell et al., 2005). Since the use of discretionary accruals to manage earnings upwards creates a significant book-tax difference, earnings management to avoid reporting earnings decline or reporting negative earnings might be detected by investigating deferred tax accounts (Phillips, Pincus and Rego, 2003).

In the case of negative pre-managed earnings or a decline in pre-managed earnings, which might lower a firm's stock price and value (market capitalisation), managers are under pressure to employ income-increasing earnings management to boost their reported earnings. This indicates that prior period earnings seem to be one of the most important benchmarks for management in making the decision on whether to engage in earnings management. Some specific circumstances also create management's motivation to select income-increasing earnings management, especially a stock-to-stock merger.

3.4.1.3 INCREASING STOCK PRICES AND REDUCING THE NUMBER OF SHARES NEEDED IN STOCK-TO-STOCK MERGERS

For a stock-to-stock merger, managing earnings upwards is preferable (Erickson and Wang, 1999; Louis, 2004). Erickson and Wang (1999) concluded that, in order to increase their stock prices and reduce the number of shares needed, acquiring firms who would use their stocks to purchase target firms' stocks or assets, managed earnings upwards in the period before the merger agreement. Similarly to Erickson and Wang (1999), Louis (2004) provided evidence that, in the quarter before the announcement of stock-to-stock mergers, acquiring firms overstated their earnings.

Pressure to stabilise and boost companies' stock prices drives managers to choose income-increasing earnings management, but they sometimes have incentives to choose income-decreasing earnings management nonetheless.

3.4.2 INCOME-DECREASING EARNINGS MANAGEMENT

In some circumstances, conservative accounting, which purposely decreases reported earnings, may be preferable for managers. Decrease in reported profits in the current period may be for individuals' benefits (McNichols and Wilson, 1988; Pourciau, 1993; Perry and Williams, 1994) or to firms' advantages (Pourciau, 1993; Nelson, Elliot and Tarpley, 2002).

3.4.2.1. SERVING INDIVIDUALS' BENEFITS FROM SPECIFIC CIRCUMSTANCES

Maximising compensation in the future (McNichols and Wilson, 1988), reporting increasing earnings in the next year after a change in executive and removing discretionary accruals before a change in executive (Pourciau, 1993) and paying lower buyout prices (Perry and Williams, 1994) drive a manager to engage in income-decreasing earnings management. McNichols and Wilson (1988) provided evidence that management uses allowances for doubtful accounts to decrease reported earnings in a year when they had excessively high earnings or extremely low earnings. This is because they aimed to maximise their compensation in the future. According to Pourciau (1993), a change in executive provides an opportunity for a new executive to engage in decreasing-earnings management in his/her first year of employment. This is to report increasing earnings in the next year. On the other hand, a previous executive tends to decrease earnings in his/her last year of service. He/she could predict their termination so that all accruals, which he/she used to maximise accounting-based compensation during their services, needed to be removed before leaving the company.

Perry and Williams (1994) also pointed out that current managers decreased reported earnings by altering the timing of recording accruals or by choosing accounting practices. This happened before the announcements of management buyouts when the current management needed to purchase all their company's shares from shareholders. Presenting the firm's poor performance may help them pay lower buyout prices.

3.4.2.2 BRINGING FIRMS BENEFITS FROM SPECIFIC CIRCUMSTANCES

Engaging in income-decreasing earnings management is sometimes the best choice to help a company gain government assistance and protection (Jones, 1991), save tax expenses (Hepworth, 1953; Guenther, 1994) and boost future earnings (Nelson, Elliot and Tarpley, 2002). Jones (1991) found that 23 US firms in five industries, for which import relief investigations were completed during the period 1980-1985, managed to report decreasing earnings during the investigations. This was to obtain protection and support from the US government. Guenther (1994) showed that some firms used income-decreasing accruals to defer the recognition of the current year's earnings to the following year when a reduction in a corporate tax rate would be effective. This helps these firms save on their tax.

Moreover Nelson et al. (2002) reported that, using existing, vague and imprecise standards, and/or without manipulating transactions, audited companies decreased current-year earnings by manipulating accounting choices in order to reverse decreasing current-year earnings in the future. This helped boost future earnings. The most manipulated areas were reserve accounts (35%) and revenue (15%).

Under stock market pressure, listed companies may be less likely to use conservative accounting to manage earnings. The speeding up of loss realisation and slowing down of gain realisation leads companies to report losses in the current year and subsequently face a reduction in their stock prices. The manager of the company, nevertheless, chooses conservative accounting choices instead of aggressive accounting choices. These conservative accounting choices allow him/her to derive high future compensation. Additionally, in these specific situations, e.g. a management buyout plan, a change in executive, a loophole in accounting standards and a change in corporate tax rate, a manager is also likely to use income-decreasing accruals management to decrease reported earnings. Engaging in income-decreasing earnings management under these circumstances aims to achieve either his/her firm's benefits or his/her own advantages. These strong incentives to decrease earnings seem to be more important than the desire to maintain a level of earnings that will significantly impact on company stock prices.

The aforementioned evidence in sections 3.4.1 and 3.4.2 is from situations that managers use solely income-increasing or income-decreasing earnings management. However, some

situations lead them to select either income- increasing or income-decreasing earnings management.

3.4.3 EITHER INCOME-INCREASING OR INCOME-DECREASING EARNINGS MANGEMENT

When their companies are close to violating restrictions of debt agreements is one example of a situation in which managers possibly use either income-increasing or income-decreasing earnings management. As pointed out by Jaggi and Lee (2002), the direction of earnings management depends on the level of financial difficulties financially distressed firms face. Income-increasing earnings management is selected in order to show creditors that the financial difficulties had a temporary impact on the company. As a result, these financially distressed firms would acquire waivers for debt covenant violations. On the other hand, income-decreasing earnings management is chosen when the impact of the financial difficulties was not temporary and the creditors rejected the financially distressed firms' requests for a waiver. A decrease in earnings could help them renegotiate the debt contracts with the current creditors or obtain new sources of loans from other borrowers.

Section 3.4 shows that managers of companies have various incentives to engage in earnings management. These incentives also influence the direction of earnings management. Pressure from stock markets to push or stabilise their stock prices gives the managers an incentive to use income-increasing earnings management. Some circumstances also lead them to choose income-decreasing earnings management, for example deferring current year's earnings in order to boost future earnings or to maximise compensation in a later year, reporting a loss in the first year after a change in executive in order to show a good performance in the subsequent year, writing off discretionary accruals in the year before the change of executive and reducing stock prices in order to pay lower buyout prices. Financially distressed firms may be faced with the dilemma of choosing income-increasing or income-decreasing earnings management.

As a result of earnings management, financial statements do not present enterprises' financial information that result from neutral business operations. In other words, they do not report neutral earnings. However what neutral earnings (Dechow and Skinner, 2000), or un-managed earnings (Burgstahler and Dichev, 1997) or real/true earnings (Copeland, 1968) are, remain subtle concepts. Burgstahler and Dichev (1997) see managed earnings as

earnings that are managed when a manager has incentive to avoid reporting earnings drop and loss. Copeland (1968) views real/true earnings as earnings that do not result from smoothing income. For this thesis's purpose, we follow Dechow and Skinner (2000). They define neutral earnings as earnings that result from a neutral reporting process. A neutral reporting process is seen as a reporting process that is not influenced by management's the exercise of judgement on accounting choices.

Lack of agreement on the definition of neutral earnings and neutral reporting process leads to the problems of what a good proxy for earnings management is and how to detect earnings management. These questions will be discussed next.

3.5 A PROXY FOR EARNINGS MANAGEMENT

As presented above, there is empirical evidence that management is likely to use accruals to manage reported earnings (e.g. Healy, 1985; Sweeney, 1994; DeFond and Jiambalvo, (1994). The accrual basis, a prominent accounting assumption, can cause the lead time between the point of time when a transaction was initially recorded and the point of time when its cash or cash equivalent were paid or received. Reporting this transaction at the end of the period also leads to the difference between the valuation of the transaction at the time when it was initially recognised and its valuation after the first recognition. In addition, accounting standards are flexible to global users (Hepworth, 1953); therefore, this may create much room for making accounting decisions. Hence, it is easier for management to use accounting accruals to manage reported earnings. Importantly, using accounting accruals does not affect companies' cash flows.

To observe earnings management through accruals management, one focus of previous studies has been to attempt to explain the accounting accrual phenomena. Their findings, in general, indicate that accounting accruals comprise non-discretionary accruals (unmanaged accruals) and discretionary accruals (managed accruals). They believe that non-discretionary accruals are accruals that naturally occur; on the other hand, discretionary accruals are accruals that vary according to management decisions and judgement. Their decisions and judgement are influenced by their motivation for earnings management as described in the previous section. Thus, discretionary accruals are used by many empirical studies as a proxy for earnings management. Previous studies have also proposed methods which are used to separate total accruals into these two types of accruals.

3.6 HOW TO DETECT EARNINGS MANAGEMENT THROUGH ACCOUNTING ACCRUALS

McNichols (2000) classified methods for estimating discretionary accruals into three groups. The first group covers aggregate accruals models. This group estimates discretionary accruals based on the assumption that total accruals are the sum of discretionary accruals and non-discretionary accruals. The estimation can be designed as a linear relation between total accruals and explanatory variables. The explanatory variables of each study depend on its assumptions of which key accounting accounts are associated with earnings management. The second group covers models that focus on earnings management through particular accounts of specific industries. Those industries are industries where a single accruals account is material on the financial statements, e.g. loss reserves among casualty insurers. The third group covers models that aim to explore financial reporting behaviours that influence companies to manage reported earnings around a favourable accounting number as explained in sections 3.4.1.1 and 3.4.1.2 (e.g., zero earnings per share, prior year earnings or last quarterly earnings).

Goncharov (2005) also summarised techniques that help detect earnings management and categorised them into three main groups: statistical approaches, simple analytical procedures and neutral network procedures. The first group includes approaches that use econometric models. The second approach is to use analytical procedures to identify unusual transactions or irregularities, for example trend analysis and financial ratio analysis. The third approach is to use case studies to train participants to identify whether it is fraud or earnings management. It observes the participants' thinking process of how they make judgement on given evidence. Goncharov's (2005) classification is broader than McNichols' (2000). McNichols (2000) focused only on methods that detect earnings management through accounting accruals.

Instead of developing a new accruals model, this thesis will use the existing accruals model that best captures earnings management. Aggregate accruals models are selected in this thesis. There are three reasons for this. First, the test of whether auditors have different reactions to earnings management (which may imply audit quality) requires a model that can accurately predict discretionary accruals (which are a proxy for earnings management). As Goncharov (2005) recommended, in comparison to other approaches in accruals models, aggregate accruals models seem to be the best choice. Although their performances are

moderate, they are appropriate for studying a large sample size. Second, aggregate accruals models are widely accepted among researchers. McNichols (2000) found that 25 of 56 articles on earnings management published in the leading journals[5] during 1993-1999 employed aggregate accruals models.

Third, although McNichols (2000) and Goncharov (2005) pointed towards some advantages of specific accruals models and deemed that these models are preferable, the aggregate accruals models are still preferable to investigate the association between earnings management and audit quality. The specific accruals models focus on discretionary accruals that occur in a specific account. However, the auditors' responsibility is to detect earnings management through all the accounts rather than a specific one. Therefore, aggregate accruals models that measure discretionary accruals of all accounts are more efficient for indicating the association between earnings management and audit quality.

Aggregate accruals models can be also classified into two groups. The first group uses econometric models and the second group predicts discretionary accruals by using simple statistics on the prior period's data. The next section will outline these two groups of models.

3.7 EMPIRICAL ACCRUALS MODELS

This section compiles a list of the existing accruals models that have been widely used in studies of earnings management. To choose the best accruals model, the author will review other researchers' comments on each model and tests of the performance of accruals models rather than directly performing the assessment.

3.7.1 REGRESSION ACCRUALS MODELS

As mentioned before, econometric accruals models are based on the concept that total accruals (ACC) are the sum of non-discretionary accruals (NDA) and discretionary accruals (DA):

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[5] These journals are The Accounting Review, Contemporary Accounting Research, Journal of Accounting and Economics, Journal of Accounting Research, Journal of Accounting and Public Policy, Journal of Accounting Auditing and Finance, Journal of Business Finance and Accounting, and Review of Accounting Studies.

$$ACC = NDA + DA.$$

$$(1)$$

In the absence of earnings management, total accruals must equal non-discretionary accruals. Discretionary accruals are deviations of total accruals from non-discretionary accruals. In other words, discretionary accruals are the difference between total accruals and non-discretionary accruals and should be zero if there is no earnings management:

$$ACC = NDA \qquad\qquad (2)$$

Conceptually, the econometric accruals models regress totals accruals (left-hand-side variable or regressand) on determinants that are used to predict non-discretionary accruals (right-hand-side variables or regressors). The error term is defined as discretionary accruals. The simple econometric model can be drawn as:

$$ACC = \alpha + \beta X + \varepsilon. \qquad\qquad (3)$$

The computation of ACC and the prediction of non-discretionary accruals, which is the term $\alpha + \beta X$, have been developed by many studies. This thesis focuses on three aggregate accruals models (Jones (1991), Modified Jones from Dechow et al. (1995), and Kang and Sivaramakrisnan (1995)), which McNichols (2000) found were frequently used in earnings management studies, and five other popular models (Industry Model, Cross-sectional Model, DD Model, McNichols Model and Performance-matched discretionary accruals). Their improvements in the computations of totals accruals, the techniques of the estimations and explanatory variables are as follows.

3.7.1.1 TOTAL ACCRUALS

In investigating earnings management, the initial step is to calculate total accruals which are the regressand. Healy (1985) initially developed the computation of total accruals. Healy (1985) believed that reported earnings were composed of cash flows from operations, non-discretionary accruals and discretionary accruals:

$$\operatorname{Re}portedEarnings(RE)=CashFlowsfromOperations(CFO)+NonDiscretionaryAccruals(NDA) \atop +DiscretionaryAccruals(DA)} \tag{4}$$

Taking (1) and (4) together, reported earnings are the sum of cash flows from operations and total accruals:

$$RE=CFO+ACC. \tag{5}$$

In other words, total accruals are the difference between reported earnings and cash flows from operations:

$$ACC=RE-CFO \tag{6}$$

Healy (1985) assumed that managers use accruals to switch reported earnings between periods. However, the sum of discretionary accruals should be zero during the period of a manager's employment. Healy (1985) also presumed that discretionary accruals affect only reported earnings but do not affect operating cash flows. Cash flows were estimated as:

$$CFO=WorkingCapital(WC)-ChangeinInventory(\Delta INV) \\ -ChangeinAccounts\operatorname{Re}ceivable(\Delta AR)+[ChangeinPayable(\Delta AP) \\ +(ChangeinIncomeTaxPayable(\Delta TP)+DeferredIncomeTaxExpense(DEF))]$$

$$\tag{7}$$

Working capital is the sum of reported earnings, depreciation and extraordinary items. The computation of total accruals is therefore:

$$ACC=RE-[RE+Depreciation(DEP)+ExtraordinaryItems(XI) \\ -\Delta INV-\Delta AR+[\Delta AP+(\Delta TP+DEP)]\}]$$

$$\tag{8}$$

Finally, total accruals are estimated as:

$$ACC=-DEP-XI+\Delta INV+\Delta AR-\Delta AP-(\Delta TP+DEP) \tag{9}$$

Healy's (1985) computation of total accruals uses the components of the balance sheet to predict total accruals. Many researchers have proposed improvements. DeAngelo (1986)

improved the computation of cash flows from operations. Unlike Healy's (1985) estimation, DeAngelo (1986) computed cash flows from operations based on Drtina and Largay's (1985) indirect method. The computation is:

$$WorkingCapitalfromOperations = IncomefromContinuingOperations +$$
$$DepreciationDepletionAmortisationExpense + DeferredIncomeTaxExpense$$
$$-UndistributedEquityMethodIncome + (-)AmortisationofDiscount(\Pr emium)onBondsPayable$$

(10)

and

$$CashFlowsfromOperations = WorkingCapitalfromOperations - IncreaseinAccounts \text{Re} ceivable$$
$$-IncreaseinInventories - Increasein\Pr epayments - DecreaseinAccountsPayable$$
$$-DecreaseinAccrualsandOtherCurrentLiabilities + DecreaseinAccounts \text{Re} ceiveable$$
$$+DecreaseinInventories + Decreasein\Pr epayments + IncreaseinAccountsPayable$$
$$+IncreaseinAccrualsandOtherCurrentLiabilities$$

(11)

Jones (1991) developed the estimation of total accruals which tends to capture more discretionary accruals from a variety of current operating accounts. Total accruals are estimated by $\Delta CA - \Delta CASH - \Delta CL + \Delta STD + \Delta TP - DEP$.

Subsequently, the estimation of total accruals developed by Jones (1991) was widely accepted and then appropriately adjusted by other researchers. Dechow, Sloan, and Sweeney (1995) calculated total accruals based on Jones' (1991) computation; however, the change in income tax payables (ΔTP) is omitted from the computation. As Jones (1991) noted, this was because data on income tax payable was not available.

Later, total accruals were predicted by using data from cash flow statements instead of balance sheet. This is due to the availability of the item of cash flows from operations provided by the data sources. DeFond and Jiambalvo (1994), Teoh, Welch, and Wong (1998a), and Teoh, Welch, and Wong (1998b) calculated total accruals as $ACC = EXBI - CFO$. Hribar and Collins (2002) deemed that this approach is more appropriate to capture discretionary accruals than the balance sheet approach if there are unexpected circumstances that will affect items on the balance sheet, e.g. mergers and acquisitions or

discontinued operations. Dechow and Dichev (2002), on the other hand, defined the left-hand-side variables as the change in working capital $(\Delta WC = \Delta AR + \Delta INV - \Delta AP - \Delta TP + \Delta AO)$.

In summary, there are two counterparts of total accruals computations (left-hand-side variable): the balance sheet approach and the cash flow approach. To compute total accruals, the balance sheet approach estimates total accruals by adjusting the change in balance sheet working capital with non-cash revenue and expenses reported on the income statement (e.g. depreciation and amortisation expense) (Dechow et al., 1995; Healy, 1985; Jones, 1991). On the other hand, the cash flow approach uses the item of *cash flows from operations* from the statement of cash flows to compute total accruals (DeAngelo, 1986; Hribar and Collins, 2002). Since Compustat did not provide the item of *cash flows from operations* prior to 1987, total accruals were computed by using the balance sheet approach (Teoh et al., 1998a; Teoh et al., 1998b).

In the recent decade of studies of earnings management, both approaches have typically been used to compute total accruals. The balance sheet approach, especially Dechow et al.'s (1995) computation, was found in the studies of Bartov, Gul, and Tsui (2001); Leuz et al. (2003); Kothari, Leone, and Wasley (2005); Bergstresser and Philippon (2006); and Caramanis and Lennox (2008). Meanwhile, the cash flow approach was used by Klein (2002); Frankel, Johnson, and Nelson (2002); Yu (2008); and Cohen and Zarowin (2010).

3.7.1.2 EXPLANATORY VARIABLES

Similar to the left-hand-side variable, researchers put more variables (e.g. change in revenues, cash flows from operations, return on assets) into regression equations in order to resolve econometric problems, e.g. autocorrelation, endogeneity and omitted variables. They also developed the methods of the estimations.

3.7.1.2.1 JONES MODEL

Jones (1991) developed the best-known accruals model. Change in revenues (ΔREV) and gross property, plant, and equipment *(PPE)* are put into the model as explanatory variables. Revenues are generally used to consider a firm's performance before earnings

management; therefore, putting change in revenues into the model helps control for economic circumstances. Gross property, plant, and equipment help reduce the effect of non-discretionary depreciation charges. All terms are scaled by lagged total assets to reduce heteroscedasticity. The coefficients of the variables are estimated from ordinary least squares (OLS) and based on time-series data.

Kang and Sivaramakrishnan (1995) pointed out that the Jones Model requires at least seven time-series observations and at least one event year. The event year is the year when earnings management is hypothesised to occur. This helps predict discretionary accruals moderately well.

3.7.1.2.2 MODIFIELD JONES MODEL

Dechow et al. (1995) believed that management might manipulate revenue recognition of credit sales in the event period. Changes in accounts receivable (ΔAR) are then added into the original Jones Model only for the event period. However, non-discretionary accruals in the estimation period (unmanaged earnings) are still derived from the original Jones Model. Similar to the original Jones Model, the coefficients of the variables are estimated by using OLS and time-series data.

3.7.1.2.3 INDUSTRY MODEL

Dechow and Sloan (1991) and Dechow et al. (1995) used the average total accruals of firms in the same industry as the parameter of non-discretionary accruals. They believed that accruals behaviours of firms within the same industry vary from firm to firm. Therefore, the estimation of each firm's discretionary accruals is based on the average total accruals of its industry. The model also employs OLS and time-series data; however, the coefficients of the variables are of each industry rather than each firm.

Dechow et al. (1995) commented that first, the industry model captures only common non-discretionary accruals. It helps reduce the variation of common non-discretionary accruals among firms within the same industry. If an individual firm's circumstances significantly influence its non-discretionary accruals, the model might measure non-discretionary accruals with errors. Second, although the model alleviates the correlation of discretionary

accruals across firms within the same industry, its validity also depends on the degree of the correlation among other variables.

3.7.1.2.4 IV/GMM MODEL

Kang and Sivaramakrishnan (1995) put more variables into the equation. This was to alleviate an omitted variable problem and to capture a large portion of discretionary accruals from a variety of accounts. Unlike other studies, Kang and Sivaramakrishnan (1995) assumed that not only revenues but also cost of goods sold and other expenses are managed by management. Therefore, operating expenses *(EXP)* are included in the equation. Instrumental variable (IV) and generalised method of moment (GMM) methods were deployed to develop the model.

3.7.1.2.5 CROSS-SECTIONAL MODEL

DeFond and Jiambalvo (1994); Teoh, Welch, and Wong (1998a); and Teoh, Welch, and Wong (1998b) developed a cross-sectional model. The model is adapted from the Jones Model and the Modified Jones Model. However, the prediction of discretionary accruals is performed by each industry. Observations which have the same year and two-digit SIC code are grouped into the same portfolio. Kasznik (1999) believed that this mitigates the effects of the specific economic circumstances of each industry on total accruals. The estimated coefficients of each portfolio are obtained by using OLS and cross-sectional data.

3.7.1.2.6 DD MODEL

Dechow and Dichev (2002) remarked that the use of accruals is to match between the time when transactions occur and the time when the cash of these transactions flows in or flows out. Therefore, they believed that accruals are correlated with the preceding year, current year and following year cash flows from operations. OLS and time-series data were used to estimate parameters. Later, McNichols (2002) commented that the relation between cash flows and accruals *per se* may not be a good measure of earnings quality. There is a need to be concerned with other factors such as an individual firm's circumstances and its management's ability.

3.7.1.2.7 MCNICHOLS MODEL

McNichols (2002) conducted a review of the DD Model developed by Dechow and Dichev (2002). A new accruals model that incorporated the Jones Model into the DD Model was proposed. The tests reported that in comparison to the Jones Model and the DD Model, this model generated a higher adjusted R^2.

3.7.1.2.8 PERFORMANCE-MATCHED DISCRETIONARY ACCRUALS MODEL

Kothari, Leone and Wasley (2005) included return on assets (ROA) in the Jones Model and the Modified Jones Model. This was to control the correlation between discretionary accruals and firm performance, which was noted in previous research (Dechow et al., 1995; Healy, 1996). Performance matching was based on the industry and the return on assets. This approach to estimate the parameter is identical to the cross-sectional model that uses OLS and the cross-sectional data.

Table 3: Summary of Eight Regression Accruals Models

Model	Author	Regressand	Regressors	Methodology, Data
Jones Model	Jones (1991)	ACC=ΔCA-ΔCASH-ΔCL+ΔSTD+ΔTP-DEP	ΔREV, PPE	OLS, Time-series
Modified Jones Model	Dechow, Sweeney, and Sloan (1995)	ACC=ΔCA-ΔCASH-ΔCL+ΔSTD –DEP	ΔREV-ΔAR, PPE (only for the event year)	OLS, Time-series
Industry Model	Dechow and Sloan (1991) and Dechow, Sweeney, and Sloan (1995)		MedianACC	OLS, Time-series
IV/GMM Model	Kang and Sivaramakrishnan (1995)	ACC=AR+INV+OCA-CL-DEP	δREV, βEXP, γPPE	IVV/GMM
Cross-sectional Model	DeFond and Jiambalvo (1994); Teoh, Welch, and Wong (1998a); and Teoh, Welch, and Wong (1998b)	ACC=EXBI-CFO	-The same as Jones Model and Modified Jones Model. -Kasznik (1999) added changes in operating cash flow (ΔCFO) into models	OLS, Cross-sectional
DD model	Dechow and Dichev (2002)	ΔWC= ΔAR+ΔINV-ΔAP-ΔTP+ΔOA	Prior period CFO, current period CFO, and following period CFO	OLS, Time-series
McNichols Model	McNichols (2002)	Similar to DD Model	ΔREV, PPE, Prior period CFO, current period CFO, and following period CFO	OLS, Time-series
Performance-matched discretionary	Kothari, Leone, and Wasley (2005)	The same as Dechow, Sweeney, and Sloan (1995)	Included return on assets (ROA) in the Jones Models and the Modified Jones Model	OLS, Cross-sectional

Table 3: Summary of Eight Regression Accruals Models (continued)

Note: Where ACC=total accruals; ΔCA =current assets in year t less current assets in year $t - 1$; $\Delta CASH$=cash in year t less cash in year $t - 1$; ΔCL =current liabilities in year t less current liabilities in year $t - 1$; ΔSTD=current portion of long-term debt in year t less current portion of long-term debt in year $t - 1$; ΔTP=income tax payables in year t less income tax payables in year $t - 1$; AR= accounts receivable, excluding tax refund; INV= inventory; CL= current liabilities excluding taxes and current maturities of long term debt; OCA=other current assets excluding cash, accounts receivable, and inventory; and DEP=depreciation and amortisation.

Teoh, Welch, and Wong (1998a), and Teoh, Welch, and Wong (1998b) decompose total accruals (TA) into current accruals (CA) or working capital accruals, and long-term accruals (LA).

To summarise 3.7.1, total accruals consist of non-discretionary accruals (unmanaged accruals) and discretionary accruals (managed accruals). As shown in Table 3 on the previous page, empirical studies developed econometric accruals models that attempt to decompose total accruals into these two types of accruals. Explanatory variables were added to the models in order to improve the capability of the models to predict discretionary accruals. For example, Dechow et al. (1995) put change in accounts receivable into the original Jones Model since they assumed that management might manipulate accounting through credit sales. Kothari et al. (2005) were concerned with the correlation between firm performance and discretionary accruals and therefore added *ROA* into the original Jones Model and Modified Jones Model. Some of these authors also proposed a new economic method for predicting discretionary accruals. Kang and Sivaramakrishnan (1995) developed the instrumental variable (IV) and generalised method of moment (GMM) methods. Cross-sectional versions of the models were developed by DeFond and Jiambalvo (1994); Teoh et al. (1998a); and Teoh et al. (1998b); and Kothari et al. (2005). Until now, the researchers have developed and proposed the new econometrics accruals models continuously and there are ample models to choose from. Some of them also estimated discretionary accruals by using statistical data from prior periods.

3.7.2 SIMPLE STATISTICAL ACCRUALS MODELS

Unlike econometric accruals models that use complicated econometric approaches to predict discretionary accruals, the simple statistical accruals models just use the statistical data from previous years to estimate the current year's non-discretionary accruals.

3.7.2.1 PREVIOUS PERIOD TOTAL ACCRUALS

Before econometric accruals models were developed, empirical studies began to estimate non-discretionary accruals from the previous years' total accruals. Healy (1985) estimated non-discretionary accruals by comparing the means of the previous 17 years' total accruals among three groups of company-years. Two groups with their cash flows from operations plus non-discretionary accruals being greater (lesser) than a limited ceiling (floor) of bonus plans were suspected of using income-decreasing discretionary accruals to maximise bonuses in the subsequent period. On the other hand, the remaining group was suspected of using income-increasing discretionary accruals to maximise bonuses in the current period. Dechow et al. (1995) inferred that Healy's (1985) discretionary accruals are the difference between the event year's total accruals and the mean of previous years' total accruals. Dechow et al. (1995) also pointed out that this model could capture non-discretionary accruals well, as long as non-discretionary accruals follow the white noise process around a constant mean. However, economic circumstances may cause non-discretionary accruals not to be constant.

DeAngelo (1986) used the previous period's total accruals as the current year's non-discretionary accruals. The current year's discretionary accruals are the difference between the current year's total accruals and the previous year's total accruals. Dechow et al. (1995) suggested that DeAngelo's (1986) model could measure non-discretionary accruals without errors if non-discretionary accruals follow a random walk and have a constant mean.

3.7.2.2 PREVIOUS PERIOD ACCOUNTING ITEMS

Later, DeFond and Park (2001) and Francis and Wang (2008) estimated the current year's non-discretionary accruals from many accounting items of the prior year's financial statements. DeFond and Park (2001) believed that a market always expects a company to have the level of working capital that is enough to support the levels of current sales. Hence, non-discretionary working accruals can be predicted by using the market's expectations. The estimated non-discretionary working accruals are the result of multiplying the current period's sales with the result of dividing the same quarter in prior year's current accruals by that quarter's sales. The current accruals are computed as:

$$CurrentAccruals = (CurrentAssets - CashandShortTermInvestment) - (CurrentLiabilities - ShortTermDebt) \tag{12}$$

Francis and Wang (2008) adopted DeFond and Park's (2001) computation of non-discretionary working capital. They deemed that not only the level of current accruals but also the level of property, plant and equipment do influence the level of sales. Therefore the level of property, plant and equipment and depreciation were added into the computation. The estimation of non-discretionary working accruals is:

$$\Pr edictedAccruals = \frac{\left\{ \left[Sales_t \times \left(CurrentAccruals_{t-1} \middle/ Sales_{t-1} \right) \right] - \left[grossPPE_t \times \left(Depreciation_{t-1} \middle/ grossPPE_{t-1} \right) \right] \right\}}{TotalAssets_{t-1}}$$

$$\tag{13}$$

Simple statistical accruals models seem to estimate non-discretionary accruals with errors if the relations between accruals and sales and/or between accruals and the level of property, plant and equipment are not linear functions. Moreover, the models ignore the influence of other factors, for example economic circumstances and unusual events that may cause the base year to have an unusually high or low ratio of current accruals to sales and/or an unusually high or low ratio of depreciation to gross property, plant and equipment.

Taking the existing aggregate accruals models in Sections 3.7.1 and 3.7.2 together shows that we now have many choices of accruals models. This leads to the question of how well these models work and which model is the best.

3.8 TESTS OF THE PERFORMACE OF ACCRUALS MODELS

Dechow et al. (1995); McNichols (2000); Bartov, Gul, and Tsui (2001) and Dechow, Hutton, Kim, and Sloan (2012) evaluated the performances of the empirical accruals models. Their methods and results are as follows.

Dechow et al. (1995) tested and compared the performances of five accruals models: the Healy Model, the DeAngelo Model, the Jones Model, the Modified Jones Model and the Industry Model. To do so, they used the following model:

$$DA_t = \alpha + \beta PART_t + \sum_{k=1}^{K} \lambda_k X_{kt} + \varepsilon_t,$$
(14)

where

DA = discretionary accruals divided by lagged total assets;

$PART$ = a dummy variable that classifies the data set into two groups: it equals 1 if it is defined as an event period (earnings management found) and 0 if it is defined as an estimation period (the period before the event t period);

X_k = (for k=1,..., K) other factors that impacts on discretionary accruals; and

ε = error term.

Dechow et al. (1995) believed that the researchers still measure DA with errors so that DAP is used as a proxy of $DA + \upsilon$:

$$DAP_t = DA_t + \upsilon_t.$$
(15)

The model can be summarised as:

$$DAP_t = \alpha + \beta PART_t + \sum_{k=1}^{K} \lambda_k X_{kt} + \upsilon_t + \varepsilon_t.$$
(16)

Other factors that influence discretionary accruals have not been identified by the researchers yet. Therefore X_ks are omitted from the model. Finally, the model is:

$$DAP_t = \alpha + \beta PART_t + \mu_t + \varepsilon_t.$$
(17)

μ_t represents the effects of the omitted variables (X_ks) and errors in the estimation of discretionary accruals (υ).

According to Dechow et al. (1995), in general, all researchers' accruals models of earnings management are estimated as:

$$DAP_t = \hat{a} + \hat{b}PART_t + \hat{e}. \tag{18}$$

Dechow et al. (1995) also pointed out that the absence of μ_t from the model can lead to the model being miss-specified in tests of earnings management. First, *PART* may not influence *DAP* but its correlation with μ_t may lead $\hat{b}$ not to be zero. This will increase the probability of type I errors. A type I error occurs when a test rejects the null hypothesis even though it is true. The test rejects the preposition that there is no relation between interesting variables and earnings management even if the true $\hat{b}$ is zero.

Second, the correlation between *PART* and μ_t is opposite in direction to $\hat{b}$. This leads $\hat{b}$ to be close to zero. This will increase the probability of type II errors. A type II error occurs when the test does not reject the null hypothesis even though it is false. The test accepts the preposition that there is no relation between interesting variables and earnings management even though the true $\hat{b}$ is not zero. Third, there is no correlation between *PART* and μ_t; however, the high correlation of the omitted variables influence $\hat{b}$. This causes the model to have a low power test.

Dechow et al. (1995) used four groups of samples. The first group is 1,000 firm-years that were randomly selected. The second group is 1,000 firm-years that were randomly selected from firm-years experiencing in extremely high performance. The third group is 1,000 firm-years that were randomly selected from firm-years to which were added a fixed and known amount of artificial accruals. The magnitude of artificial accruals ranged from zero to 100 % of lagged total assets. The fourth group is 32 firms (56 firm-years) that were alleged by the US SEC to overstate their annual earnings.

Dechow et al. (1995) reported that, with a random sample of event periods (or periods when earnings management occurs), all models showed a high performance in detecting earnings management. However, the Modified Jones Model outperformed the others because it provided the lowest probability of type II errors. They also noted that none of the models could capture a small magnitude of earnings management; say 1-5% of total assets. These models could generate miss-specified tests if the samples had extremely high/low earnings performances.

McNichols (2000) used 27,158 US firm-year observations during 1988-1998 to test whether the cross-sectional Jones model's discretionary accruals and the cross-sectional Modified Jones model's discretionary accruals correlate with a firm's performance and long-term growth. The model is:

$$DA = a_0 + a_2 ROA + a_3 GROWTH + \varepsilon ,$$
(19)

where ROA is return on assets and $GROWTH$ is the median of analysts' long-term earnings growth forecasts.

Unlike Dechow et al. (1995), McNichols (2000) highlighted that the Jones Model and the Modified Jones may not provide the most powerful and reliable test for all studies of earnings management behaviours. There is a correlation between discretionary accruals estimated by these two models and long-run earnings growth. The more the company has a high expectation of earnings growth, the more it may have a high level of accruals. In addition, McNichols (2000) cast doubt on the association between the partitioning variables ($PART$) and earnings growth in previous studies.

Bartov, Gul, and Tsui (2001) conducted a study of whether different accruals models can generate different results in indicating the association between auditors' qualified opinions and discretionary accruals. The Jones Model, the Modified Jones Model, the cross-sectional Jones Model, the cross-sectional Modified Jones Model, the Industry Model, the DeAngelo Model and the Healy Model were tested. The final sample included 173 US firms that received qualified audit reports in 1980-1997. Bartov et al. (2001) indicated that in comparison to the time-series versions, the cross-sectional versions of the Jones Model and the Modified Jones Model provided a better performance in detecting earnings management by investigating the association between auditors' qualified opinions and

discretionary accruals. Similar to Dechow et al. (1995), Bartov et al. (2001) found that the Modified Jones Model also had a good performance.

Recently, Dechow, Hutton, Kim, and Sloan (2012) replicated the study of Dechow et al. (1995). Dechow et al. (2012) believed that the existing accruals models had not significantly improved since the study of Dechow et al. (1995). Some new accruals models used a performance-matched procedure to militate against miss-specified tests (e.g. Kothari et al. (2005)), but this procedure could weaken the power of the test nonetheless. The performance-matched accruals models would be effective only if omitted variables could be identified and used as the criteria for matching. Dechow et al. (2012) tested the performance of five popular accruals models, which are the Healy Model, the Jones Model, the Modified Jones Model, the DD Model and the McNichols Model.

Dechow et al. (2012) used the new concept that accruals in one period may be reversed in later periods. The model is:

$$WC\_ACC_{i,t} = a + bPART_{i,t} + cPART1_{i,t} + dPART2_{i,t} + \sum_k f_k X_{k,i,t} + e_{i,t} \,, \tag{20}$$

where $WC\_ACC_{i,t}$ = non-cash working capital accruals = $\dfrac{\left(\Delta CA_{i,t} - \Delta CL_{i,t} - \Delta Cash_{i,t} + \Delta STD_{i,t}\right)}{A_{i,t-1}}$;

$$\tag{21}$$

$\Delta CA_{i,t}$ = the change in current assets;

$\Delta CL_{i,t}$ = the change in current liabilities;

$\Delta Cash_{i,t}$ = the change in cash;

$\Delta STD_{i,t}$ = the change in short-term debt;

$A_{i,t}$ = total assets;

$PART_{i,t}$ = a dummy variable that equals 1 if it is a year that earnings management is conjectured to occur and 0 otherwise;

$PART1_{i,t}$ = a dummy variable that equals 1 if it is the first year following the earnings management year and 0 otherwise;

$PART2_{i,t}$ = a dummy variable that equals 1 if it is the second year following the earnings

      management year and 0 otherwise; and

X_k = other control variables.

Tests on whether $b=0$, $b+c=0$ and $b+c+d=0$ were to detect earnings management. The test procedures were similar to Dechow et al. (1995). However, Dechow et al.'s (2012) sample covers 209,530 firm-year observations in 1950-2009 compared to Dechow et al.'s (1995) sample which covered 168,771 firm-year observations in 1950-1991.

Dechow et al. (2012) emphasised that it is important to integrate the concept of periodical accruals reversal with accrual-based tests of earnings management. However, they brought up two issues. First, accrual-based tests for earnings management generate a low power of tests if discretionary accruals are at small magnitudes, the sample is small and the statistical significance is low. Second, inevitably the studies of accruals-based earnings management face miss-specified tests that arise from the correlation between omitted variables and non-discretionary accruals. They also suggested that the selection of accruals models should be concerned with economic factors that might be correlated with the hypotheses about earnings management. For example, the Jones or the Modified Jones Models is appropriate for hypotheses that earnings management is correlated with sales growth.

The studies that have evaluated the performance of existing accruals models, indicate varying results. Dechow et al. (1995) and Bartov et al. (2001) concluded that one or more than one model (especially the Jones Model and the Modified Jones Model) outperform the others. On the other hand, McNichols (2000) argued that the Jones Model and the Modified Jones Model might not be efficient models in all contexts of earnings management study. The cross-sectional versions of the Jones Model and the Modified Jones Model outperform their time-series versions in identifying the association between auditors' qualified opinions and discretionary accruals (Bartov et al., 2001).

The selection of accruals model also depends on the study's objectives (McNichols, 2000) and hypotheses (Dechow et al., 2012). Some studies underlined determinants that must be controlled owing to their correlations with earnings management, e.g. firm performance (Kothari et al., 2005), cash flows (Dechow and Dichev, 2002) and long-term growth

(McNichols, 2000). Controlling all these determinants will lead to stronger findings in future studies of earnings management because they help mitigate the impact of omitted variables on earnings management. If a period of time when a reversal of accruals occurred can be identified, the incorporation of dummy partitioning variables into the models helps improve the power and specification of the tests (Dechow et al., 2012).

3.9 SUMMARY

Creative accounting, smoothing income and accruals manipulation are the origin of the concept *earnings management*. Definitions of earnings management are also influenced by researchers' perspectives (Beneish, 2001) and specific objectives of empirical studies (Goncharov, 2005). Therefore, the generally accepted definition of earnings management remains a controversial topic (Beneish, 2001).

According to Schipper's (1989) and Healy and Wahlen's (1999) definition of earnings management and Dechow and Skinner's (2000) classification of earnings management, earnings management occurs when management has the intention not to report neutral earnings. They exert an influence over the financial reporting process, exercise judgement on the selection of accounting choices and aim for specific benefits. In other words, earnings management occurs when management intends to alter the neutral reporting process in order to report what they want, rather than to report neutral earnings.

Earnings management can be either aggressive or conservative accounting and can be income-increasing or income-decreasing earnings management. It also can be done by real operating decisions or by decision-making on financial reporting. The techniques and direction of earnings management depend on the management's incentives to manage reported earnings.

In general, accounting accruals comprise discretionary accruals and non-discretionary accruals. Non-discretionary accruals are unmanaged accruals that naturally occur in the normal course of business. On the other hand, discretionary accruals are managed accruals that are influenced by a management's motivation for earnings management and that cause reported earnings to vary from neutral earnings. Therefore empirical studies of earnings management use this type of accruals as a proxy for earnings management.

Many empirical studies have developed approaches to detect earnings management, especially through the investigation of accruals. Aggregate accruals approaches are generally accepted by most researchers into earnings management. In comparison to specific accruals approaches that obtain discretionary accruals from a single account, aggregate accruals approaches can capture discretionary accruals of many accounts. They also help researchers deal with a large sample size. Therefore, the author will choose the aggregate accruals approach to identify the association between earnings management and audit quality. This is because auditors are required to verify the reasonableness of all accounts rather than a single account.

Aggregate accruals approaches can be complicated econometric models or simple statistical approaches. To date, ample econometric models, for example the Jones Models, the Modified Jones Model, the Industry Model and the DD Model have been proposed. These models have been widely used in the study of earnings management. On the other hand, the simple statistical models are, for instance, the Healy Model, the DeAngelo Model and the McNichols Model. Owing to the limitations of the simple statistical models that unusual circumstances in the base year may lead to predictions of the current year's accruals having errors, they are less popular than the econometric models.

The literature review in this chapter provides the extant definitions and the motivations for earnings management. It also looks for a proxy for earnings management, gives a list of existing accruals models and reports the results of the empirical studies that evaluated the performances of these accruals models. There is, nevertheless, room to delineate the in-depth understanding of earnings management as following topics.

3.9.1 WHICH ACCRUALS MODEL PROVIDES THE MOST EFFICIENT TEST ON THE ASSOCIATION BETWEEN EARNINGS MANAGEMENT AND AUDIT QUALITY?

The reviews of the literature on accruals models in this chapter still provide unclear evidence of the best accruals model that may provide the most efficient test of the association between earnings management and audit quality. The selection of accruals model depends on the objectives and hypotheses of the study. In other words, accruals models might not be applied to all contexts of earnings management study. For example,

the uses of the cross-sectional versions of the Jones Model and the Modified Jones Model as well as the Modified Jones Model succeed in identifying the association between auditors' qualified opinions and discretionary accruals (Bartov et al., 2001).

There is also more room for improvement of accruals models. Firm performance (Kothari et al., 2005), cash flows (Dechow and Dichev, 2002) and long-term growth (McNichols, 2000) should be controlled. This helps alleviate the effect of omitted variables on earnings management. The incorporation of the accruals reversal concept into the models helps increase the power and specification of the tests of earnings management (Dechow et al., 2012).

This chapter is not closed by providing the detail of the specific accruals model which will be used in this thesis. As mentioned earlier, there remains a need to consider the objectives and conjectures of the study before selecting the accruals model. The main objective of this thesis is to identify the association of earnings management and audit quality in the context of the international comparison. Chapter 5 will thoroughly review empirical studies on the association between earnings management and audit quality again. This will inform the author's decision as to which accruals model will be selected in this thesis.

3.9.2 AUDITOR AND EARNINGS MANAGEMENT

There is still a lack of consensus on the concept of earnings management. As previously mentioned, earnings management may be defined differently owing to the researchers' different perspectives on it and the objectives of the research. This thesis focuses on the role of auditors in detecting earnings management. Earnings management may be one indicator of audit quality. Therefore, it is crucial to explore how the auditors and other stakeholders of the audit processes see earnings management and how earnings management is associated with auditors and audit quality. Chapter 4 will define the concept of audit quality. Chapter 5 will link the concept of earnings management and audit quality together.

CHAPTER 4

AUDIT QUALITY

4.1 INTRODUCTION

The purpose of an audit is to give an auditor appropriate and sufficient evidence on the degree to which a company's financial statements are prepared and presented fairly, in all material respects, in accordance with an applicable financial reporting framework. To achieve this purpose, the auditor is required to conduct the audit in compliance with the generally accepted auditing standards and relevant ethical requirements.

An audit is the reverse process of an accounting. It starts on items that are included in the financial statements and traces back to their evidence. An auditor has to collect sufficient appropriate audit evidence in order to ascertain that the financial statements truthfully present effects of events relating to those items. At the end of an audit, a set of audited financial statements and an auditor's report on these financial statements will provide users with reliable financial information that is necessary for them to make relevant decisions.

Section 100 of the Handbook of the Code of Ethics for Professional Accountants written by the IAASB forbids an auditor to disclose any information acquired as a result of an audit and/or use the information for his/her advantage. This also means that an audit is a confidential process that other people cannot observe. Only a set of audited financial statements and an auditor's report are accessible to the public. The supporting audit evidence and audit working papers are not publicly available. Therefore, this poses a challenge in assessing the quality of an audit provided by an auditor.

Audit quality has received the attention of auditors and other stakeholders of audits, academics and researchers. Especially, they have focused on the association between auditor scepticism, auditor independence and audit quality. These key stakeholders of audits believed that auditor scepticism and auditor independence are two key factors that influence audit quality. In other words, audit quality is associated with auditor scepticism and auditor independence.

Auditor scepticism is deemed to be the most crucial characteristic of an auditor. ISA 200 defines "*Professional scepticism* as an attitude that includes a questioning mind, being alert to circumstances that may indicate possible misstatement due to error or fraud, and a critical assessment of audit evidence". The standard exemplifies the matters which an auditor needs to be concerned with, e.g. contradictions among several sources of audit evidence relating to the same circumstance, doubts about the credibility of documents, and warning signs of fraud. Referring to the Financial Services Authority and the Financial Reporting Council's (2010) meaning, professional scepticism is reflected in the auditor's doubt as to whether accounting policies implemented by the management are in accordance with GAAP. The Financial Services Authority and the Financial Reporting Council (2010) also highlighted that the impairment of audit scepticism can be partially blamed for the loss of financial market's trustworthiness, financial stability and consumer protection as a consequence of the recent financial downturn in the UK.

Independence is another feature of an auditor alongside audit scepticism. In the absence of audit independence, the auditor may not reveal the truth and may easily agree on a compromise with a manager; in consequence, audit quality is impaired. Importantly, lack of audit independence is also a leading cause of the impairment of audit scepticism. The Handbook of the Code of Ethics for Professional Accountants written by the International Federation of Accountants requires an auditor to maintain independence from his client in terms of mind and appearance. Without independence of mind, the lack of integrity, objective decision, and professional scepticism causes bias in the result of an audit. The damage to independence in appearance arises when there is existing evidence leading third parties to raise doubt about audit independence.

This chapter further defines the concept of audit quality and the following chapter will cover the link between earnings management and audit quality. This chapter collects recent evidence from auditing and accounting studies with respect to audit quality that was published in leading accounting and auditing journals[6] during the period of 2000-2011. It is believed that dynamic improvements in the auditing profession during the latest decade

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[6] The study selected accounting and auditing journals, which the Association of Business Schools rated as 4 and 3 -star journals as of 28 June, 2010. Therefore, the review included the Accounting Review, the Journal of Accounting Research, the Journal of Accounting and Economics, the Review of Accounting Studies, the Accounting, Auditing & Accountability Journal, the Critical Perspectives on Accounting, the Accounting, Organizations and Society and the British Accounting Review.

may provide theoretical perspectives of audit quality. Section 4.2 discusses the definition of audit quality. Section 4.3 assesses different measurements of audit quality. Section 4.4 lists factors that influence audit quality proposed by previous studies. Sections 4.5 and 4.6 document attempts to promote audit quality and investigations into a country's accounting and audit environment at an international level, respectively. Section 4.7 provides a summary of this chapter.

4.2 WHAT IS AUDIT QUALITY?

Audit quality is at the heart of auditing. Insufficient audit quality is the leading cause of an audit failure. In the wake of accounting scandals and audit failures (e.g. Enron and WorldCom in the US at the beginning of the 21st century, ComROAD's accounting manipulations in Germany in 2002 and the UK recent financial downturn), regulators and standard setters have attempted to promote audit quality, for example the UK's Financial Reporting Council and the International Auditing and Assurance Standards Board (IAASB).

Researchers have also provided much evidence for audit quality. This is to raise the public's awareness of audit quality. A list of recent evidence for audit quality that is included in this chapter is shown in Table 4 below.

Table 4: The Recent Studies Associated with Audit Quality

Study	Main research framework	Methodolody	Data country	Year
National level				
Chan and Wong (2002)	Audit effort and liability regimes	Econometric model and equilibrium solution	US	n/a
Patterson and Wright (2003)	Audit effort and liability regimes	Econometric model and equilibrium solution	US	n/a
Guedhami and Pittman (2006)	Institutional factors and ownership concentration	Regression analysis	31 countries	1980-2001
Yu (2011)	Legal systems, audit independence and audit effort	Experiment and regression analysis	US	n/a
Hilary and Lennox (2005)	AICPA's peer review programme of audit firm inspection	Regression analysis	US	1997-2003
Doogar, Sivadasan and Solomon (2010)	Replacment of the standard issued by AICPA	Regression analysis	US	2004-2007
Mayhew and Pike (2004)	Investor selection of auditors	Experiment and regression analysis	US	n/a
Menon and Williams (2004)	Employments of former audit partners	Regression analysis	US	1998-1999
Lennox (2005)	Employments of former audit partners/managers	Regression analysis	US	1995-1998
DeFond, Raghunandan and Subramanyam (2002)	Non-audit service and auditor independence	Regression analysis	US	2001
Craswell, Stokes and Laughton (2002)	Fee and auditor independence	Regression analysis	Australia	1994 and 1996
Chung and Kallapur (2003)	Fee, audit quality and auditor independence	Regression analysis	US	2001
Whisenant, Sankaraguruswamy and Raghunandan (2003)	Audit and non-audit fee	Regression analysis	US	2001
Kinney Jr, Palmrose and Scholz (2004)	Non-audit service and auditor independence	Regression analysis	US	1995-2000
Francis and Ke (2006)	Non-audit service and auditor independence	Regression analysis	US	1999-2002
Johnson, Khurana and Reynolds (2002)	Audit firm tenure	Regression analysis	US	1986-1995
Mansi, Maxwell and Miller (2004)	Audit firm tenure and industry specialisation	Regression analysis	US	1974-1998
Myers, Myers and Omer (2003)	Audit firm tenure	Regression analysis	US	1988-2000
Ghosh and Moon (2005)	Audit firm tenure	Regression analysis	US	1990-2000
Carey and Simnett (2006)	Audit partner tenure	Regression analysis	Australia	1994,1996,2001 and 2004
Lu (2006)	Opinion shopping	Econometric model and equilibrium solution	n/a	n/a

Table 4: The Recent Studies Associated with Audit Quality (continued)

Study	Main research framework	Methodolody	Data country	Year
Firm level				
Bagnoli, Penno and Watts (2001)	Source of information	Econometric model and equilibrium solution	n/a	n/a
Krishnan (2003)	Industry specialisation	Regression analysis	US	1989-1998
Dunn and Mayhew (2004)	Industry specialisation	Regression analysis	US	1990-1996
Gul, Fung and Jaggi (2009)	Industry specialisation and audit tenure	Regression analysis	US	1993-2004
Reichelt and Wang (2010)	Industry specialisation	Regression analysis	US	2003-2007
Mayhew (2001)	Reputation formation	Experiment and regression analysis	US	n/a
Chaney, Jeter and Shivakumar (2004)	Reputation and private companies	Regression analysis	UK	1994-1998
Gaver and Paterson (2001)	Reputation	Regression analysis	US	1993
Chaney and Philipich (2002)	Reputation	Regression analysis	US	2001-2002
Weber and Willenborg (2003)	Reputation	Regression analysis	US	1993-1994
Kim, Chung and Firth (2003)	Reputation	Regression analysis	US	1984-1998
Pittman and Fortin (2004)	Reputation	Regression analysis	US	1977-1988
Louis (2005)	Reputation	Regression analysis	US	1980-2002
Bar-Yosef and Sarath (2005)	Auditor choice	Econometric model and equilibrium solution	US	n/a
Weber, Willenborg and Zhang (2008)	Reputation	Regression analysis	Germany	2001-2002
Hyatt and Prawitt (2001)	Audit methodology	Experiment	US	n/a
Power (2007)	Audit strategy	Dicussion	n/a	n/a
Peecher, Schwarzt and Solomon (2007)	Audit strategy	Dicussion	n/a	n/a
Khalifa, Sharma, Humphrey and Robson (2007)	Audit strategy	Interview and content analysis	UK	n/a
Knechel (2007)	Audit strategy	Dicussion	n/a	n/a
Robson, Humphrey, Khalifa and Jones (2007)	Audit strategy	Dicussion	n/a	n/a
Curtis and Turley (2007)	Audit strategy	Case study	UK	n/a
Bell, Doogar and Solomon (2008)	Audit strategy	Regression analysis	US	2002-2003
Johnstone and Bedard (2004)	Portfolio management	Regression analysis	US	2000-2001

Table 4: The Recent Studies Associated with Audit Quality (continued)

Study	Main research framework	Methodolody	Data country	Year
Engagement level				
Nelson, Elliot and Tarpley (2002)	Client importance	Survey and regression analysis	US	1998
Gaver and Paterson (2007)	Client importance	Regression analysis	US	1993
Fan and Wong (2002)	Corporate govenance	Regression analysis	7 countries	1991-1995
Larker and Richardson (2004)	Accruals management and corporate govenance	Regression analysis	US	2000-2001
Fan and Wong (2005)	Shareholding concentration	Regression analysis	7 countries	1994-1996
Carcello and Neal (2000)	Audit committee	Regression analysis	US	1994
Carcello and Neal (2003)	Audit committee	Regression analysis	US	1988-1999
Owhoso, Messier Jr and Lynch Jr (2002)	Industry-specialised team	Experiment	US	n/a
Bell, Landsman and Shackelford (2001)	Audit working hours	Survey and regression analysis	US	1989
Johnstone and Bedard (2003)	Risk management	Regression analysis	US	1997-1998
Caramanis and Lennox (2008)	Audit working hours	Regression analysis	Greece	1994-2002
Jamal and Tan (2001)	Review	Experiment	US	n/a
Tan and Trotman (2003)	Review	Experiment and regression analysis	Australia	n/a
Messier Jr, Owhoso and Rakovski (2008)	Review	Experiment	US	n/a
Tan and Jamal (2001)	Review	Experiment	US	n/a
Wilks (2002)	Review	Experiment	US	n/a
Brazel, Agoglia and Hatfield (2004)	Review	Experiment	US	n/a
Earley (2001)	Training	Experiment	US	n/a
Trotman, Wright and Wright (2005)	Training	Experiment	Australia	n/a

Even though there have been attempts to promote audit quality, what *audit quality* is remains open to question. The extant definitions of audit quality provided by Lu (2006), Gaver and Paterson (2007), Gul et al. (2009) and Yu (2011) are likely to reflect only investors' views of audit quality. They define audit quality as an auditor's ability to detect misstatement. Unlike others, Gul et al. (2009) also believes that management plays a prominent role in promoting audit quality. Yu (2011) added that audit quality occurs when an auditor issues a proper audit report.

Various empirical studies have proposed different definitions of audit quality. Nonetheless the Financial Reporting Council (2006) commented that no perfect definition could be used as a guideline to evaluate real audit quality. This may be because the stakeholders of audit seem to have different perspectives on audit quality. As pointed out by the IAASB (2011), the level of investors' and audit committees' participation in an audit and the criteria used to evaluate audit quality lead to different perceptions of audit quality. Consequently, investors perceive audit quality as an observable outcome (e.g. reputation and auditor report); on the other hand, audit committee members perceive it as an on-going process.

Up to now, the guidelines that are used to draw a line between a good quality audit and others remain unclear. Referring to the International Standard on Auditing 220: *Quality Control for an Audit of Financial Statements* (ISA220) and the International Standard on Quality Control 1: *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements* (ISQC1), an auditor and an audit firm are required to maintain and establish a quality control system. This system shall help the auditor and the audit firm ensure that the firm, its staff and an audit engagement comply with professional standards and related legal and regulatory requirements and that audit reports are appropriate in the circumstance. This may indicate that a minimal level of audit quality is needed to perform an audit in compliance with professional standards and related legal and regulatory requirements.

From the above views, it can be deduced that audit quality is a result of an effective process and a satisfactory outcome. Under the effective auditing process, an auditor and an audit firm shall at least comply with professional standards and related legal and regulatory requirements and shall put effort into detecting material misstatements. The satisfactory

outcome is an auditor's report that is appropriate in the circumstances. Owing to a lack of universal definition, audit quality seems to be a subjective concept that is difficult to measure.

4.3 HOW TO MEASURE AUDIT QUALITY

Real audit fieldwork is not allowed to be observed or investigated. Therefore, researchers have generally used ex-post data of audits to evaluate the process of audit instead of accessing the process of an audit as it is being conducted. This ex-post data is accruals, the auditor's report, the incidence that companies beat or miss their performance benchmarks, the result of regulatory audit firm inspection and the restatements of audited or reviewed financial statements.

4.3.1 ACCRUALS

A major number of studies used discretionary accruals as an indicator of audit quality (e.g. Chung and Kallapur, 2003; Myers, Myers and Omer, 2003; Carey and Simnett, 2006; Reichelt and Wang, 2010). However, for the purpose of their studies, they employed different accruals models. Chung and Kallapur (2003) observed the impact of audit fees and non-audit fees. Myers et al. (2003) were interested in the influence of long audit firm tenure. Carey and Simnett (2006) investigated the effect of long audit partner tenure. Reichelt and Wang (2010) focused on industry specialist auditors. All of them believed that a high level of reported discretionary accruals indicates a low level of audit quality.

Discretionary accruals were also used to identify the association between long audit firm tenure and financial reporting quality (Johnson, Khurana and Reynolds, 2002) and the relationship between fees paid to the audit firms and earnings quality and audit independence (Larcker and Richardson, 2004). Myers et al. (2003) pointed out that audit quality could be reflected in earnings quality. This shows that audit quality may also be associated with financial reporting quality or earnings quality. However, these associations are out of scope of this thesis.

4.3.2 THE AUDITOR'S REPORT

An audit report is the output of an audit and can be a sign of audit quality. Empirical studies have also used an auditor's opinion as a surrogate of audit quality, especially a going-concern audit report (e.g. Carey and Simnett, 2006; and Reichelt and Wang, 2010). Carey and Simnett (2006) presumed that long audit partner tenure might lead to the familiarity threat. The familiarity threat would reduce the probability that the audit partners would give going-concern audit reports to their clients even when those clients faced financial difficulties. This in turn impairs audit quality.

To distinguish industry specialist auditors from the others, Reichelt and Wang (2010) used the incidence of issuing the going-concern audit report as well as discretionary accruals to measure audit quality. Their assumption was that the more the auditors issue going-concern audit reports, the higher audit quality the auditors have. They believed that auditors with industry expertise could perform well at risk assessment and come under great pressure to protect their reputation.

4.3.3 BEATING/MISSING BENCHMARKS OR LAST YEAR'S EARNINGS

Carey and Simnett (2006) also used the incidence that companies beat or miss their performance benchmarks to observe whether long audit partner tenure undermines audit quality. Profits that are 1% or 2% of total assets and previous year's profits are two performance benchmarks that they used. Carey and Simnett (2006) hypothesised that owing to the familiarity threat, long audit partner tenure would also increase the probability that the companies would achieve their performance benchmarks. To achieve their performance benchmarks, these companies might perform earnings management. This would indicate that long audit partner tenure reduces audit quality.

4.3.4 THE RESULT OF REGULATORY AUDIT FIRM INSPECTION

Hilary and Lennox (2005) used the American Institute of Certified Public Accountants' (AICPA) results of investigating audit firms' quality control systems as information that may affect audited companies' decision on audit choices. The audit firms that received

AICPA's unmodified opinion on their quality control systems are assumed to have a high probability for maintaining their existing clients and getting new clients.

4.3.5 FINANCIAL RESTATEMENTS

Kinney Jr, Palmrose and Scholz (2004) used the restatements of audited or reviewed financial statements to observe the association between financial reporting quality and audit fees and non-audit fees. They believed that the restatements indicate a low quality financial reporting. A low audit quality could draw inference from a low quality financial reporting.

Audit quality is a subjective concept which is difficult to measure. Its precise meaning is still a central topic of argument in empirical studies. Nonetheless, to measure audit quality, many previous studies used discretionary accruals which are generally used as a proxy for earnings management. Reporting a high level of discretionary accruals, as well as, expressing a going-concern audit report, beating or missing performance benchmarks and restating previous year's financial statements are quantitative indicators that can be observed by what can be seen (e.g. auditor's reports, audited financial statements). However, maintaining existing clients or getting new clients after the results of regulatory audit firm inspection are published are likely to be a really effective way to evaluate audit firms' audit processes. Similarly to giving the meaning and measure of audit quality, identifying factors that may influence audit quality is difficult for researchers.

4.4 FACTORS INFLUENCING AUDIT QUALITY: EVIDENCE FROM PRIOR RESEARCH

This section will discuss how to promote audit quality. The promotion of audit quality might be from a national, firm or engagement level, as follows.

4.4.1 NATIONAL LEVEL

At national level, regulators and standard setters have a key role in promoting audit quality. In doing so, they shall exercise responsibility to monitor and control auditors and audit firms in order to raise awareness of audit quality among them. Previous studies indicated

that the regulators and standard setters can promote audit quality through imposing legal liability and penalties on the auditors and the audit firms and setting the mechanism of controlling and monitoring over them.

4.4.1.1 LIABILITY AND PENALTIES

With respect to his/her negligence in detecting material misstatement or fraud, an auditor is punished by the professional institution's rules and regulations and other related laws (SEC laws). Therefore, heavy penalty and punishment for audit failure are perceived to raise the auditor's awareness of audit quality. However, Chan and Wong (2002) and Patterson and Wright (2003) provided contradictory findings. They believed that hash punishment for an audit failure might not really increase audit effort. Chan and Wong (2002) and Patterson and Wright (2003) used audit effort level as an indicator of audit quality level. These two studies used the equilibrium concept and econometric equation to prove their prepositions. Chan and Wong (2002) drew five prepositions whilst Patterson and Wright (2003) had three prepositions. Chan and Wong's (2002) prepositions indicated the relationship between audit effort and auditor liability regimes. Patterson and Wright's (2003) prepositions showed the association between probability of fraud and audit effort level, auditor liability regimes and audit effort, cost of audit effort and equilibrium audit effort level, and cost of audit effort and audit risk.

Chan and Wong (2002) argued that it is unnecessary to promote audit quality by extending the scope of auditor accountability to third parties: from his/her extreme negligence to ordinary negligence and from his/her predicted third parties who rely on the auditor report to potential third parties who are defined as recipients of his/her audit service and outcome. The auditor may not increase the audit effort even when his/her accountability is extended if marginal cost of audit effort is not greater than marginal profit from avoiding legal liability.

Patterson and Wright (2003) also contended that obvious evidence of fraud rather than liability regimes drives auditors to exert more effort to detect fraud. These liability regimes are either joint-and-several liability regimes or proportional liability regimes. Under a joint-and-several liability regime, the auditor must absorb all the remaining client's portion of damages which his/her client cannot pay. On the other hand, the auditor must share only

his/her percentage of total damages under the proportional liability regime. They added that the level of audit effort also depends on cost of effort, the audited company's motivation for committing fraud and how a court of law assesses audit quality.

By contrast, Guedhami and Pittman's (2006) and Yu's (2011) results indicated that harsh penalties have an indirect influence on audit quality. Guedhami and Pittman (2006) regressed a level of ownership concentration indicated by a percentage of shares held by the three largest shareholders and the Herfindahl index on a country's disclosure requirements, auditor-related characteristics (civil liability and criminal sanction) and other control variables. Guedhami and Pittman's (2006) study covers 31 countries. They believed that high ownership concentration creates an opportunity for controlling shareholders to extract private benefits at minor shareholders' expense. Their findings indicate that a country's stringent civil and criminal punishments for audit failures do help it reduce ownership concentration among listed companies and also lead to an increase in minority investors' trustworthiness of financial reporting in that country. Securities laws outperform other legal factors and a good structure of legal systems that impose on the auditors helps a country promote financial reporting quality. Guedhami and Pittman (2006) finally highlighted the role of securities laws in controlling and monitoring the auditors.

Yu (2011) conducted experiments on moral reasoning and also used regression analyses to identify the association among legal systems, audit effort and audit independence. Yu (2011) believed that audit effort and audit independence are two key factors of audit quality. Participants of the experiments were senior business school students, audit partners and companies' managers. The experiments involved the managers' decision-making on companies' investment and the auditors' decision making on audit evidence. The participants' decisions also influenced their cash rewards at the end of the experiments. Yu (2011) provided evidence that an auditor's proportional liability for audit failure increases audit effort level. A stricter legal regime raises the auditors' awareness of audit independence. Integrating them together improves auditor moral reasoning and reduces the likelihood of auditors' misreporting.

Although the studies in the context of the US provided inconsistent results, the multinational evidence still indicates that different laws relating to an auditor's liability and penalties for an audit failure may affect audit quality. Difference in methodologies of

these studies may lead to their contradictory findings. From their varying results, it can be inferred that legal institutions in the US are significantly different from other jurisdictions[7]. Notwithstanding this contradictory evidence, the author presumes that a country's legal system may influence audit quality at a national level. It may raise auditors' awareness of audit quality and audit firms' motivation for maintaining their reputation and avoiding litigation cost. The next section will turn the focus on to the role of regulators and standard setters in establishing a country's mechanism to control and monitor auditors.

4.4.1.2 MECHANISM TO CONTROL AND MONITOR AUDITORS AND AUDIT FIRMS

The impacts of key mechanisms to control and monitor auditors and audit firms on audit quality were observed by many prior researchers. These mechanisms are the transformation of the accountancy profession's regulator from a self-regulator into being regulated by independent regulators, an auditor's liability and penalties for an audit failure, a regulatory audit firm inspection, a policy on investor selection of an auditor, a restriction on the employment of the current audit firms' former partners/managers, a ban on non-audit service and a mandatory audit firm/audit partner rotation.

4.4.1.2.1 INDEPENDENT INSTITUTION-REGULATION AND INDEPENDENT REGULATORY AUDIT FIRM INSPECTION

Changing the controlling and monitoring of auditors from professional self-regulation to independent institution-regulation aims to improve transparency in the auditing profession and to restore the image of the auditing profession. This independent regulator also has taken responsibility to inspect audit firm quality, especially on registrant audit firms of listed companies. This is to assure the public and investors that the audit firms have effective quality control systems. The independent inspection of audit firm seems to be one of the most important factors that promotes audit quality at a national level.

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[7] Supportive evidence is, for example Seetharaman, Gul and Lynn (2002). Their regression analyses of audit fees indicate that owing to stricter market laws and higher exposure to litigation, UK auditors billed UK firms that traded on the US stock markets for a higher audit fees.

Hilary and Lennox (2005) and Doogar, Sivadasan and Solomon (2010) observed this significant change in the US where the auditing profession was changed from professional self-regulation (under which auditors are controlled and monitored by the AICPA) to statutory control and monitoring (under which auditors are controlled and monitored by PCAOB: the Public Company Accounting and Oversight Board). However, they reported varying results.

Since the AICPA's peer review programme that inspected audit firms' quality control system were perceived to be less effective, it was replaced by PCAOB's audit firm inspection under the passage of the Sarbanes-Oxley Act in 2002. This led Hilary and Lennox (2005) to pose the question on the effectiveness of the AICPA's peer review programme. They therefore observed the association between changes in a number of clients in the period 12 months after the audit firms received peer review opinions. They found that the audit firms that received unmodified opinion significantly gained new clients whilst those that received adverse or modified opinions were dismissed by their existing clients. This implied that the AICPA's peer review programme was also an effective mechanism to promote audit quality among the audit firms. Hilary and Lennox (2005) suggested that it is noteworthy to publish the results of an audit firm inspection as soon as the inspection process is completed.

Dooger et al. (2010) observed a change in role of the standard setter from the AICPA to the PCAOB. They investigated the consequences of the replacement of the Auditing Standard No. 2 (issued by AICPA) by the Auditing Standard No.5 (issued by PCAOB). Even though these two standards are about audits of internal controls over financial reporting, AS 5 was developed to be more flexible and more encourage auditors to use a risk-based audit approach. Dooger et al. (2010) used audit fee as a proxy for labour usage and a dependent variable. They concluded that the auditors were more likely to use the risk-based audit approach after AS 5 had been announced. Saving labour usage (lower audit fee) for lower-fraud risk clients helps the auditor increase labour usage (higher audit fee) for higher-fraud risk clients. Dooger et al. (2010) believed that AS 5 helped promote audit quality and improved some inefficiencies of AS 2.

There remains unclear evidence that the benefits of transformation from professional self-regulation to independent institution-regulation in the US outweigh its disadvantages. As

mentioned earlier, the accounting environment in the US seems to be significantly different from other countries. Leuz et al. (2003) reports that the US has a high level of investor protection. In this thesis, it is conceivable that statutory control and monitoring over auditors, especially audit firm inspection and mandated policies and standards may be an effective mechanism for promoting audit quality in countries where the investors have a low level of protection.

4.4.1.2.2 NEED FOR INVESTOR SELECTION OF AUDITOR

To promote auditor independence, there should be a mandatory requirement that gives the right to investors to choose listed companies' auditors. Mayhew and Pike (2004) conducted the experiment and regression analyses in order to identify the influence of investor selection of auditors on auditor independence. Whether the auditors agree or disagree with information on investments chosen and disclosed by managers is proxy for auditor independence. Mayhew and Pike (2004) suggested that shifting the responsibility for selecting and dismissing auditors from the companies' managements to other dependent parties (e.g. shareholders) effectively increases auditor independence. If the managers select the auditors, it is likely that the auditors' decisions tend to serve clients' preferable accounting solutions. This impairs audit autonomy. However, Mayhew and Pike's (2004) experiment seems to be subtle because the auditor selection scenarios the study used are based on simple assumptions (e.g. management selects an auditor by considering only audit fee). In reality, audit fee may not be the most influential factor in selecting auditors; however, there are many determinants that influence a decision about choice of auditor, for instance pressure from parent companies.

4.4.1.2.3 RESTRICTION ON THE EMPLOYMENT OF THE CURRENT AUDIT FIRMS' FORMER PARTNERS/MANAGERS

Auditor-client affiliation occurs when an auditor and audited entity have a close relationship. It is then suspected of impairing auditor independence. The employment of the current audit firm's former partner/manager is one form of auditor-client affiliations. Therefore, the prohibition of listed companies to employ their current audit firms' former partners/managers was imposed on these companies to address this auditor independence

threat, for example with the US's Sarbanes-Oxley Act. Menon and William (2004) and Lennox (2005) observed the impact of this prohibition.

Menon and Williams (2004) ran signed and unsigned cross-sectional version of Jones' (1991) discretionary accruals on a binary variable indicating a matter that a former audit partner of the current audit firm was later employed by his/her current audited company. Reported accruals are used to observe auditor independence. The greater the company reports discretionary accruals, the lesser the auditor is independent. Menon and Williams (2004) found high abnormal accruals among companies that employed former audit partners of their current audit firms.

Lennox (2005) observed the employment of the current audit firms' former audit partners/managers and audit quality. Unlike Menon and Williams (2004), Lennox (2005) investigated types of audit opinions and turnovers of these former audit partners/managers after the current audit firms' issuances of unfavourable audit reports. Lennox (2005) provided evidence that the audit firms have a high probability of issuing unqualified audit reports to audited companies that employed their former audit partners/managers. Lennox (2005) believed that this impairs audit quality. This indicates that the employment of the current audit firms' former audit partners/managers aim at receiving favourable reports. Lennox (2005) suggested that regulators should pay more attention to the case of audit firms who successfully bid for clients as a consequence of their ex-staff members' inducements to persuade current employers to change auditors.

The ban on the listed companies' employment of their current audit firms' former partners/managers might improve audit independence and audit quality. It may reduce a magnitude of reported discretionary accruals and increase the quality of an auditor's report. However, as pointed out by Menon and Williams (2004), solely observing discretionary accruals might be an ineffective way to support an Act that proscribes the employment of the current audit firms' former audit partners as necessary. They believed that a high level of discretionary accruals might also be an informative predictor of future performance. Other characteristics of companies with a high level of reported discretionary accruals may be also associated with these companies' employment of former audit partners.

4.4.1.2.4 BAN ON A NON-AUDIT SERVICE

Regulators do not worry only that the employment of the current audit firms' former audit partners/managers lessens auditor independence and audit quality, they also worry that providing a non-audit service and an audit service to a client at the same time may impair audit independence. Therefore, auditors are not allowed to provide both other services and audit services to one client at the same time. This led numerous prior studies to investigate the impact of providing a non-audit service to the same audit client. Current evidence is gathered from the US (DeFond, Raghunandan and Subramanyam, 2002; Whisenant, Sankaraguruswamy and Raghunandan, 2003; Chung and Kallapur, 2003; Kinney_Jr, Palmrose and Scholz, 2004; Francis and Ke, 2006). All studies used regression equations to test their hypotheses; however, their dependent and independent variables are different.

Although providing both other services and audit services to one client at the same time is perceived to be an independence threat, much recent evidence from the US contends that it does not undermine audit independence as per our perceptions. DeFond et al. (2002) contended that the auditor may be aware of his/her risk of losing reputation and paying an indemnity in case of audit failure in preference to concern only about his/her revenues from client, with the result that providing both audit and non-audit services to one client at the same time does not curtail the likelihood of the auditor issuing a going-concern report, which is a measure of auditor independence. Chung and Kallapur (2003) used discretionary accruals as a proxy for audit qaulity and non-audit fee or audit fee to total revenue ratio as a proxy for audit fee dependence. They also found no evidence indicating that the importance of the client to the auditor impairs audit independence.

Providing both other services and audit services to one client at the same time might bring benefits to auditors and/or their clients. Whisenant et al. (2003) regressed audit fees on non-audit fees and non-audit fees on audit fees. Audit fees have a significant positive association with non-audit fees only when they ran single-equation regression but not simultaneous-equation regression. The difference in the results between these two techniques led them to interpret that there is a flow of knowledge when the auditor provides both audit service and non-audit service to one client at the same time. Knowledge can be transferred from non-audit services to audit services and vice versa.

Unlike DeFond et al. (2002), Chung and Kallapur (2003) and Whisenant et al. (2003), the test on the US evidence performed by Francis and Ke (2006) supported the view of regulators. By regressing accumulated abnormal returns on audit and non-audit fees, it reported that providing audit and non-audit service to one client at the same time calls audit independence into question. For firms with high non-audit fees, investors perceive that auditors allow clients to manage accruals; and in turn investors cast serious doubt on the company's earnings quality and devalue the stock price.

Similarly to DeFond et al. (2002), Craswell, Stokes and Laughton (2002) used the probability that auditors from Australia would issue going-concern audit opinions as a measure of auditor independence. They also found that audit fee dependence at either national level or local office level [8] does not impair audit independence. Under the competitive market in which clients have considerable latitude to select audit and non-audit providers, audit firms have to implement an effective control system to review and monitor audit independence (e.g. peer review and concurring partner review). Otherwise, they will lose clients.

If audit quality can draw inference from auditor independence, much evidence here contends that providing both other services and audit services to one client at the same time does not impair audit quality. The differences in the studies' measures of auditor independence and methodologies may lead them to have varying results. In addition, providing other services to the same audit client may be a win-win for an auditor and his/her client in the US and Australia where, as indicated by Leuz et al. (2003), they have a high level of investor protection and a low level of earnings management. However, its prohibition may be an effective way to promote audit quality in countries where they have a low level of investor protection and a high level of earnings management.

4.4.1.2.5 MANDATORY AUDIT FIRM ROTATION

Not only are the regulators concerned about the auditor-client relationship and the effect of audit fees and non-audit fees, they also keep their eye on the length of auditor-client relationship that results from long audit firm tenure. Audit firm tenure is the number of

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[8] Local office level refers to audit firm in each state or city whilst national office level is the entire audit firm in that country. In the US and Australia, audit firms in each state or city individually manage the office's operating and audit fee.

consecutive years that a company has employed the audit firm. Many prior studies therefore focused on the real impacts of audit firm tenure on audits. Johnson et al. (2002), Myers et al. (2003), Mansi et al. (2004), Ghosh and Moon (2005) and Gul et al. (2009) provided recent evidence from the US. All of them used regression analyses.

On average, audit-firm tenure was longer than seven years (after they traded on the stock exchange) in the US. Mansri et al.'s (2004) mean (median) audit-firm tenure of their sample was 10.12 (9.00) years. Ghosh and Moon (2005) and Gul et al. (2009) reported the mean of their samples' audit-firm tenure at about 8.549 and 8.016 years, respectively.

There is evidence that a long audit partner tenure does not impair audit quality despite regulators' and policy setters' worry about its negative effects on auditors (i.e. impairing audit independence). Especially, there is much evidence from the observations of reported discretionary accruals. Johnson et al. (2002) used cross-sectional modified Jones discretionary accruals to investigate the impact of audit firm tenure on financial reporting quality. The regression of unsigned discretionary accruals reported that, by using a medium audit-firm tenure (4-8 years) as a benchmark, only a short audit-firm tenure (2-3 years) has a significant positive relationship with unsigned discretionary accruals. They then concluded that a long audit-firm tenure (nine or more years) does not undermine financial reporting quality. In comparison to a medium audit-firm tenure (4-8 years), the quality of financial reports is weakened as a consequence of a short audit-firm tenure (2-3 years).

Johnson et al. (2002) suggested that policy on audit firm rotation might be necessary if the audit firms' incentive for long audit firm tenure is to maintain clients. However, it might also reduce financial reporting quality because incumbent audit firms might lack specific client knowledge in the first few years of their audits. Johnson et al.'s (2002) sample covers only observations audited by big 6 audit firms; the author has doubt as to whether including observations audited by non-big 6 audit firms might alter their findings.

Myers et al. (2003) tested the associations between signed Jones discretionary accruals and audit-firm tenure and between current accruals and audit-firm tenure. They provided evidence that longer audit-firm tenure leads the auditors to have more ability to detect accruals management and more opportunity to limit income-increasing and income-

decreasing accruals. Myers et al. (2003) deemed that if mandatory audit-firm or audit-partner rotation aims to promote audit and/or earnings quality, it is pointless to impose this mandatory audit rotation since their results showed that long audit firm tenure does not reduce audit and/or earnings quality.

The observation of the influence of an auditor's industry expertise and audit tenure on earnings quality performed by Gul et al. (2009) also found that a short-audit tenure (three years or below) is associated with a high level of reported discretionary accruals that are estimated by the model developed by another study. They interpreted that a short-audit tenure has a low earnings quality.

Unlike Johnson et al. (2002), Myers et al. (2003) and Gul et al. (2009) who observed reported discretionary accruals, Mansi et al. (2004) and Ghosh and Moon (2005) observed other parties' perceptions of audit-tenure. Mansi et al. (2004) used bond rating and credit spread to observe investors' perceptions of audit firm tenure. They reported significant negative relationships between audit firm tenure and bond rating and between audit firm tenure and credit spread. This led them to conclude that investors perceived firms with long-tenures have more reliability; therefore, the investors did not require these firms to have higher rates of return. Mansi et al. (2004) argued that mandatory auditor rotation might not be an effective policy because switching auditors might lead a bond market to perceive those firms as riskier firms. Since Mansi et al. (2004) conducted the study of the bond market where they might have different environment from the stock market, the author believes that the positive influence of audit firm tenure on audits in the stock market remains unclear.

Ghosh and Moon (2005) used stock return, stock ranking, debt rating and earnings forecast errors to investigate the impact of audit-firm tenure on the creditability of reported earnings among investors, independent rating agencies and financial analysts. They found that all these parties perceive long audit tenure to be a sign of improving audit quality and of a high reliability of reported financial information. Ghosh and Moon (2005) also pointed out that mandatory audit firm/partner rotation may increase unexpected costs among all parties in a capital market.

Recent evidence here shows that long auditor-client relationships might not impair audit independence and audit quality; therefore, the mandatory audit firm/partner rotation might be unnecessary. However, the important limitation of these studies is their loose definitions of auditor-client relationships. Since information on individual auditors was not provided by the studies' sources of data, they observed only auditor-client relationships that resulted from audit-firm tenure. The observation of auditor-client relationships that resulted from audit-partner tenure might lead to the different findings. To date, a small number of countries have imposed mandatory audit firm rotation on their listed companies. Most countries have mandatory audit partner rotation whilst they are studying the pros and cons of mandatory audit firm rotation.

4.4.1.2.6 MANDATORY AUDIT PARTNER ROTATION

Audit-partner tenure is the number of consecutive years that the auditor has been appointed by a company. Similarly to long-audit-firm tenure, the regulators are aware that long-audit-partner tenure might lead to the familiarity threat and the impairment of auditor independence. They imposed a requirement of audit partner rotation especially on listed companies. Carey and Simnett (2006) investigated the real impacts of audit-partner tenure on audits in Australia. They found that 44% of their Australian sample had a short-audit-partner tenure (less than or equal to two years) whilst 15% of them had a long-audit-partner tenure (more than seven years).

Carey and Simnett (2006) found that long-audit-partner tenure impairs audit quality in cases where audit quality is measured by the auditor's propensity to express a going-concern opinion and by the likelihood that their client reports favourable earnings. When the auditors provide long auditing services to one client, it is unlikely that they will issue going-concern auditors' reports even when there is clear evidence indicating that the client has financial difficulty. There is also a high incidence where the clients manage earnings to meet a benchmark (avoiding loss and significant variation). However, there is no evidence indicating the association between long-audit-partner tenure and working capital accruals.

Lu's (2006) econometric model and equilibrium solution showed that client opinion shopping and dismissal threats do not affect the independence of current and former auditors. The current auditor performs a higher audit quality than the previous one. As a

result of the current auditor's and the stock market's reaction to the change in auditor, the company cannot take advantage of the auditor switching to do opinion shopping. Lu's (2006) evidence seems to show the benefit of audit partner rotation.

The different measures of audit quality used by researchers lead to inconsistent results of the influence of audit-partner tenure on audit quality, for example the study of Carey and Simnett (2006). The study of Lu (2006) did not provide a clear definition of the term *auditor*. The term *auditor* could refer to an individual audit partner or an audit firm. If the term *auditor* represents an audit firm, its results could be interpreted that audit-firm rotation promotes audit quality. The audit-firm rotation could be either from a big audit firm to a non-big audit firm or vice versa, including the rotation of audit firms within the same type. However, if the term *auditor* means an individual audit partner, its results could be also interpreted that rotation of audit partner even within an audit firm promotes audit quality. The limitations of these two studies as this thesis raised here still call into question the impact of long audit-partner tenure on audits.

4.4.2 FIRM LEVEL

At a firm level, to promote audit quality, audit firms may need to build and maintain their auditor reputation and expertise in audits of specific industries. They also need to develop their audit methodologies continually. How these factors are associated with audit quality are as follows.

4.4.2.1 BUILDING AND MAINTAINING AUDITOR REPUTATION (BRAND NAME)

In most accounting and auditing studies, audit firms are categorised according to their sizes (big or small firm). To control audit firm size in the studies' regression equations, a dummy variable is coded 1 if an audit firm is defined as a big firm and 0 otherwise, or vice versa. The big 4/5/6/8 audit firms[9] are perceived as prestigious and reputable auditors who

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[9] The name of big audit firm was changed according to their mergers of the big firms in the past. The big firm group started with the Big 8, which consisted of Arthur Andersen; Arthur Young & Co.; Coopers & Lybrand; Ernst & Whinney; Deloitte Haskins & Sells; Peat Marwick Mitchell; Price Waterhouse and Touche Ross. In 1989, Ernst & Whinney merged with Arthur Young to be Ernst & Young and Deloitte Haskins & Sells merged with Touche Ross to be Deloitte & Touche. The Big 8 therefore became the Big 6. As a result of the merger between Price Waterhouse and Coopers & Lybrand in 1998, PricewaterhouseCoopers was formed. Then the Big 6 transformed into the Big 5. The

provide a high quality audit. Investors, the management and the auditor himself/herself are important parties that help build an auditor's reputation and increase the demand for purchasing audit services from well-known firms (Mayhew, 2001). Mayfew's (2001) experiment showed that auditor reputation forming is strengthened when investors rapidly reward managers for hiring prestigious auditors. To secure their reputation and attract clients, auditors are forced to continue to supply their clients with a high quality audit.

Third parties perceive that the reputable audit firms have higher quality and are wealthier than others. Therefore, these audit firms have more credibility. This indicates that choosing the big 4/5/6/8 audit firms brings benefits to audited companies. Pittman and Fortin (2004) observed firms' interest rate. They concluded that in the absence of a proper credit history, the employment of the big 6 auditors enables newly listed companies to gain high credibility of published financial information and, in turn, to succeed in reducing their cost of capital. It is especially beneficial for younger firms at the time of going public. Mansi et al. (2004) also found that rating of bonds issued by firms with the big 6 audit firms is higher than that of those issued by firms with the non-big 6 audit firms. This difference is approximately one minor rating category. Mansi et al.'s (2004) example was that if a firm is audited by a non-big 6 audit firm, it would receive BBB. However, if it is audited by a big 6 audit firm, it would receive BBB+.

Their reputation for being higher quality auditors and wealthier firms also gives the big 4/5/6/8 audit firms a big advantage. Bar-Yosef and Sarath's (2005) econometric model and equilibrium solution demonstrated that the presence of the belief that the big firm auditors provide a high audit quality leads these auditors to have a greater market share of the auditing service industry and become more profitable. Also, higher audit quality firms have a greater chance of being employed by higher quality clients. On the other hand, lower audit quality firms are selected by lower quality clients. This is because the higher audit quality firms may have good systems that prevent them from high-risk clients who may try to employ them.

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collapse of Arthur Andersen in 2002 led the Big 5 becoming the Big 4 until today, which comprises KPMG; Deloitte Touche Tohmatsu; PricewaterhouseCoopers; and Ernst & Young.

Bar-Yosef and Sarath (2005) assumed that both types of audit firms may have equal opportunities to develop technologies for helping them to produce a high quality report. Therefore, they also believed that their results might be partially explained by the fact that there might be a difference in these two types of firms' capability to invest in audit technologies. In addition, good listed companies may have high stock prices. Their failure may lead to serious consequences. Therefore, the high quality auditors, who are selected by these good companies, have a strong motivation for providing high quality reports.

There is also empirical evidence indicating that the big audit firms provide a high quality auditor's report and high earnings quality. However, the big audit firms were defined as the big 4/5/6/8 audit firms and the mid-tier audit firms. Weber and Willenborg (2003) found that a few sources of information intermediaries (e.g. analysts), who provided information on small-market capitalisation IPO companies, lead investors to pay more attention to the companies' audit reports. The audit reports issued by the big 6 audit firms and the second tier audit firms (e.g. Grant Thornton and BDO Seidman) better reflect the investment viability of these companies than those issued by local audit firms. Their pre-IPO opinions can be better used to predict the company stock performance after IPO, especially the pre-IPO going-concern opinions of distressed companies. Larker and Richardson (2004) also agreed with the previous study's implication that the big audit firms are aware of their reputations so that they cannot tolerate their clients' accruals managements. They defined the big audit firms as the Big 5 audit firms, including Grant Thornton and BDO Seidman. Larker and Richardson's (2004) findings could be inferred that financial statements audited by the big audit firms have higher earnings quality measured by discretionary accruals.

Misreporting significantly damages auditor credibility, fast tarnishes auditor reputation (Mayhew, 2001) and even causes a litigation exposure for an auditor and an audit firm. Serious consequences of misreporting are magnified in the case of the big 4/5/6/8 audit firms' misreporting. Loss of auditor reputation that results from misreporting significantly affects not only the auditors or audit firms themselves but also their clients. Chaney and Philipich (2002) observed a cumulative abnormal return of Arthur Andersen's other clients during the period when Andersen was accused of Enron's failure. They reported that the

stock price of other Arthur Andersen clients decreased sharply during the three days after the fact that Arthur Andersen destroyed audit documents was released[10].

Weber et al. (2008) also used cumulative abnormal return to investigate a consequence of ComROAD's accounting scandal regarding fictitious revenues found in 2002. They found that investors' shock at ComROAD's case led to a negative stock market reaction on KPMG's other German clients and some existing audit clients left KPMG. This indicates that in countries with a low litigation risk, for example Germany, investors solely use auditor reputation as an indicator of audit quality. Evidence from Chaney and Philipich (2002) and Weber et al. (2008) may indicate that the big 4/5/6/8 audit firms may have a greater incentive to maintain their reputation and avoid misreporting; therefore, they are more concerned with their audit quality.

However, there is also empirical evidence that the big audit firms do not outperform other firms in some circumstances. Gaver and Paterson (2001) examined the cumulative adjustment of error in loss reserve account among property-casualty insurers who got low rating assessed by the regulator. They found that their under-recording the loss reserve is prevented only by the use of both big 6 auditors and big 6 actuaries but not the use of both big 6 auditors and non-big 6 actuaries. This indicates that quality of audits provided by the big 6 auditors might be also reduced when they over rely on the work of other specialists.

Kim et al. (2003) tested management's reporting incentives and an auditor's motivations for limiting reported discretionary accruals. They pointed out that a high litigation risk creates the big 6 auditors' motivation for stopping income-increasing earnings management. The big 6 auditors will exert more auditor scepticism. Since income-decreasing earnings management does not pose a litigation risk to the big 6 auditors, the big 6 auditors do not have motivation for stopping it. Kim et al. (2003) provided evidence that in comparison to the non-big 6 auditors the big 6 auditors are more flexible about income-decreasing earnings management. The conflict between the reporting incentives of the management and the motivations of the auditor or the lack of this conflict can be

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[10] Nelson, Price and Rountree (2008) weakened Chaney and Philipich's (2002) findings. They contended that the stock market's negative reaction to other Andersen clients was not only attributable to Andersen's loss of reputation but also to a sharp decline in oil prices in the Energy sector and the mixed effect of Andersen's client portfolios.

considered to be a key determinant of the difference in audit effectiveness between the big 6 auditors and the non-big 6 auditors.

Louis (2005) investigated the auditor choice during firms' mergers. Louis (2005) found that external audit by the big-4 firms is not necessary for acquirers. However, the non-big 4 audit firms have high performance, especially when targets are the private firms and the auditors also provide other services relating to mergers. Louis (2005) explained that investors always perceive small companies audited by the non-big 4 audit firms to have low quality financial information. These small companies therefore are willing to be thoroughly audited in order to prove that they also have high quality financial information, contrary to what investors generally thought. This in turn may help them lower their cost of capital. Louis (2005) also interpreted the results that the non-big 4 audit firms may have more competence in advising their clients on mergers or these small and uninterested acquirers may promote an image of themselves by their mergers.

A deep-seated belief that the reputable big 4/5/6/8 audit firms have high quality still exists among stock market participants. Maintaining their reputation and avoiding facing dire consequences of an audit failure lead these reputable firms to raise awareness of their audit quality. In addition, there is evidence that the big 4/5/6/8 audit firms and the second-tier audit firms may have an equal audit quality and that the employment of the big 4/5/6/8 audit firms may not necessarily imply the high quality audit. To win auditor reputation, the audit firms need to promote and sustain their audit quality. The audit firms do not have a motivation only for building and maintaining their brand names but also for building their expertise in audits of specific industries.

4.4.2.2 BUILDING INDUSTRY SPECIALISM

Under intense competition in the audit market and the circumstance that a client deliberately selects an auditor, it is necessary for audit firms to differentiate themselves from others. Therefore, they need to position themselves into specific industry markets by constructing their industry expertise. Possessing specific industry knowledge leads audit firms to have a good internal source of client information. Therefore, they have a great advantage over others. Bagnoli et al.'s (2001) econometric model and equilibrium solution showed that owing to their private sources of client information, auditors could gain

advantages over others in competitive audit markets where all auditors have equal access to public information about clients.

Having specific industry expertise also increases the effectiveness of audits. Krishnan (2003) found that companies audited by the big 6 audit firms with industry expertise report discretionary accruals less than those audited by the big 6 audit firms without industry expertise. Earnings reported by companies audited by the big 6 audit firms with industry expertise therefore have higher quality. According to Gul et al. (2009), lack of client specific knowledge at the time of the first year audit seems to be attributable to low earnings quality. However, it is compensated by auditor industry specialisation. Moreover, Dunn and Mayhew (2004) pointed out that the audit firms with industry expertise, as well as the mandate for additional special disclosure in some industries (e.g. banking and insurance), help listed companies promote the quality of their disclosures.

Reichelt and Wang (2010) reported that clients of audit firms with both national-level and city-level industry expertise report a low level of discretionary accruals and are less likely to beat or meet analysts' forecasts. The audit firms with both national-level and city-level industry expertise are more likely to express unqualified audit opinion. These findings led Reichelt and Wang (2010) to view that the integration of national-level and city-level industry expertise is an important factor in improving audit quality. Reichelt and Wang (2010) also believed that owing to their national-level and office-level industry expertise, the big 4 audit firms outperform others in the audit market.

Much recent evidence here indicates that having expertise in audits of specific industries lead audit firms to outperform others in having a better internal source of client information, limiting earnings management and accruals management and reducing audit risk in the first year of audit engagement and misreporting. These in turn lead to high audit quality. However, to identify audit industry expertise is difficult. Empirical studies have used different measures to label an auditor as an industry specialist. According to Krishnan (2003), an auditor was labelled as a specialist in industry specific knowledge if either the individual firm's portfolio share or the firm's market share exceeds 15%. However, 20% of market share was the minimum percentage for identifying industry expertise in the study of Dunn and Mayhew (2004). Gul et al. (2009) described an audit industry expert as an audit firm who has the greatest market share of clients in that industry. Reichelt and Wang

(2010) used two definitions to label an audit firm as a national and a city audit industry specialist. The first definition is an audit firm whose market share is at least 10% higher than the second rank of national/city market. The second definition is an audit firm whose market share is greater than 30% of the national market (50% of the city market). The author raises doubt that the validity of these studies' inferences hinges on the effectiveness of their criteria for identifying audit firms with industry expertise.

4.4.2.3 DEVELOPING AUDIT METHODOLOGIES

To earn a reputation for being a high quality audit firm and being a specialist in audits of specific industries, an audit firm needs to have its well-structured and designed audit methodologies. This is because audit methodology is the key tool for audit team members to perform audit works and for audit partners and audit managers to control their subordinates. In other words, it has direct impacts on audit quality. To develop effective and efficient audit methodologies, the audit firm needs to be concerned with the prospect of following effects.

4.4.2.3.1 MATCHING BETWEEN AUDIT METHODOLOGY AND STAFF CHARACTERISTICS

Hyatt and Prawitt (2001) conducted an experiment that observed the influence of audit firms' structure on their staff's job performance. They found that the match between firms' structure and individual locus of control helps the audit firms and the auditors improve their job performances. The auditors, who have an external locus of control, have a good performance under a high structured working environment. These auditors believe that a good outcome is a result of unpredicted external factors (e.g. fate, chance or luck). Their performances will be promoted under an audit environment where the audit firms control their staff by using guidance and policies. On the other hand, the auditors, who have an internal locus of control, have a high performance under unstructured working enforcement. These auditors believe in individual behaviours. They will perform their job very well under an audit environment where the audit firms have less control over their staff.

However, the Auditing Practices Board (2010) suggested that standardised audit techniques and guidance might impair auditor scepticism because they do not encourage the auditors to have scepticism, which requires auditors' free thoughts of Wh-questions. Similar to standardised audit techniques and guidance, electronic working papers sometimes harm auditor scepticism when the auditors spend too much time on completion of these electronic working papers rather than on inspection of audit evidence.

To promote audit quality, based on Hyatt and Prawitt's (2001) findings, audit firms should design their audit methodologies that are appropriate to the characteristics of their staff. Also, they need to be concerned with the impact of their audit methodologies on auditor scepticism as pointed out by the Auditing Practices Board (2010). In addition, they need to implement well-designed audit approaches.

4.4.2.3.2 IMPLEMENTATION AND DEVELOPMENT OF MODERN AUDIT STRATEGIES

Many factors force audit firms to develop their audit approaches. Power (2007) gave a short explanation of auditing evolution. Traditional audit began with performing a massively detailed test. Since business has become more complex, auditors must perform tests of control so as to reduce their work (reduce transaction testing). Bell et al. (2008) pointed out that the burden of auditors' responsibilities, the public's high expectations of auditors, changes in client business environment and audit fee pressure are the important factors that drive audit firms to develop audit approaches and promote audit quality. The author found that the important recent developments of audit approach are, for example business risk auditing (BRA) and strategic-systems audit (SSA).

According to Power (2007), BRA has been widely implemented. It brought the risk management concept into an audit. BRA is an audit that pays more attention to client business risk and adapts this client business risk to gather audit evidence. Although BRA is perceived as an auditor's strategy to broaden non-audit service to their clients, Knechel (2007) believed that BRA remains necessary for an auditor under the current circumstances whereby regulators give more focus to accounting fraud and internal control system. However, Robson et al. (2007) suggested that BRA is only what big audit firms use to differentiate themselves from others and shift their roles from auditor to business

adviser. Curtis and Turley (2007) pointed out that BRA might be difficult to implement. From their case study, audit firms and auditors may face many problems in practice. For example, it is difficult to link what the auditor is comfortable with within the results of testing controls to what an audited entity presents on financial statements. BRA is costly to implement because it takes time and requires highly skilled practitioners. Whilst Peecher et al. (2007) commented that the strategic-systems audit is one of the most important mechanisms which help auditors to meet current public expectations of high audit quality.

Bell et al. (2008) investigated audit working hours in the period pre- and post-BRA. They found that under the BRA approach, the audit firm assigns appropriate team members and allocates effective labour (moderately reducing total audit hours). BRA focuses more on the client business risk. It requires the auditors to have an in-depth understanding of client business, which helps them effectively allocate audit working hours and assign an appropriate audit team. Therefore, their audits are more effective than before the implementation of the BRA when the auditors used the transaction cycles approach in their audits. Total audit working hours decrease whilst time spend on audits by partners and managers increases.

Audit firms rarely publish their audit approaches. Nonetheless, KPMG's audit approaches have been available to be studied. With funds supported by KPMG, Bell, Marrs, Solomon and Thomas (1997) developed the risk-based strategic-systems audit approach which provides an innovation to auditing. Under this new paradigm of audit procedure, auditors need to have an in-depth understanding of an audited entity (especially its business and process strategies). This is in response to the globalisation of world trade, which led audited entities to become more complex, to be vulnerable to failure, and to engage in many modern management strategies. The audited entity's business risk, rather than audit risk, has a profound effect on an audit process.

To support the risk-based strategic–systems audit approach, Bell, Peecher and Solomon (2005) developed a recursive evidence-driven, belief-based risk assessment that aims to assist audit firms in promoting their audit quality. This approach stresses that the auditor performs a risk assessment well when he/she considers evidence from all three sources - entity business state (third parties who have relations with the audited entity), management information intermediaries (e.g. internal control system, standards and policies,

information systems, documentations) and management business representations (e.g. ledgers, journals, financial statements, interviews, press releases).

The content analysis comparing 1997 and 2005 KPMG audit methodologies performed by Khalifa et al. (2007) indicated that the 2005 version focuses on audit quality whilst the 1997 one pays more attention to business value. The new version highlights audit risk rather than business or strategic risks and focuses on audit process instead of value creation.

The dynamic of a change in accounting and auditing environments forces audit firms to develop audit strategies and approaches that help them succeed in promoting the efficiency and effectiveness of their audit processes.

4.4.2.3.3 IMPLEMENTATION OF EFFECTIVE RISK STRATEGY

The quality of an audit process begins with how effectively audit firms process client acceptance and continuance. Accepted and continuing clients pose a risk to audit firms. Therefore, high audit quality requires audit firms to employ an effective risk strategies that help mitigate all risks to an acceptable level. Johnstone and Bedard (2003) pointed out that the implementation of a risk-management strategy during the client acceptance process depends on the clients' unique risks. The study of Johnstone and Bedard (2003) covers two risk-management strategies: the personal strategy and the billing strategy. The personal strategy is to assign those clients which have particular risks (e.g. fraud and error risk) to the auditors who have an industry specialisation. Specialist auditors can help audit firms to lessen the risks and finally reduce the cases of audit failure and litigation. When the personal strategy may ineffectively reduce the clients' specific risks (e.g. going-concern risk and the risk of trading in a stock market), the billing strategy is a better alternative choice for audit firms. Therefore, high-risk clients with high audit fees are also likely to be accepted by audit firms.

Johnstone and Bedard (2004) also found that to manage its audit firm portfolio, an audit firm pays more attention to audit risk factors (e.g. internal control system, financial reporting quality and management integrity) than to financial risk factors (e.g. leverage, profitability, ability to remain competitive). Auditors minimise the overall risk of client portfolios by balancing incoming, outgoing and existing clients' risks. They discontinue

high risk clients, accept new clients who have lower risk than existing clients, and, in turn, the overall risk of the portfolios gradually become lower over time.

To sum up 4.4.2, prior studies perceived audit firms' audit quality to be associated with their auditor reputation and expertise in audits of specific industries. One of their limitations is the validity of their classifications of audit firms according to their size and expertise in audits of specific industries. The audit firm's development of their audit methodologies seems to be the direct factor that improves audit quality. The audit methodology is very important for audit team members to perform an audit and for audit partners and managers to control and monitor an audit process.

4.4.3 ENGAGEMENT LEVEL

At an engagement level, an audited entity and audit team members play an important role in improving audit quality. Previous studies provided the following evidence.

4.4.3.1 AUDITED ENTITY

Some characteristics of an audited entity itself may influence audit quality. Examples of these characteristics will follow.

4.4.3.1.1 AUDITED COMPANY SIZE

The size or importance of a client company can sometimes pose a threat to the promotion of audit quality. Nelson et al. (2002) conducted a survey of audit partners' experiences in their clients' earnings management. They reported that in comparison to small size clients' attempts to engage in earnings management, those attempts of large size clients measured by their sales were less likely to be adjusted by the auditors. However, the observation of the loss reserves account among property-casualty insurers conducted by Gaver and Paterson (2007) provided inconsistent findings. Gaver and Paterson (2007) measured the client influence by their audit fees or premium paid to their audit firms' local office. They found that financially difficult insurers are less likely to under record the loss reserve even when they are of importance to their audit firms. They concluded that the influence of the

client on the audit firm's local office does not impact audit quality. As explained by Gaver and Paterson (2007), the audit firm assigns high quality staff to its important clients because an audit of the important client needs to be more thoroughly performed. If an audit failure of this important client occurs, it will significantly tarnish the audit firm's reputation.

Evidence from Nelson et al. (2002) indicates that audited companies might sometimes wield power on audit firms. This might impair audit quality. However, Gaver and Paterson (2007) provided contradictory evidence. This might be because Gaver and Paterson (2007) focused only on the property-casualty insurance industry which is under strict rules and regulations. In addition, the audited companies' pressure on their auditors might be attenuated by good corporate governance.

4.4.3.1.2 SHAREHOLDING DISPERSION AND INSTITUTIONAL SHAREHOLDERS

Shareholding structure is one of the key factors that promotes good corporate governance and financial reporting quality. Fan and Wong (2002) indicated that in the presence of attempts to promote financial transparency by regulators and policy setters, firms in Hong Kong, Indonesia, Malaysia, Singapore, South Korea, Taiwan and Thailand could not achieve this goal because the companies' shares were held by only a small group of investors. These controlling powers may avoid reporting the truth. This is to take advantage of minority shareholders and to avoid leaking confidential information that may find its way to the competition and the public. They also have power to manipulate earnings and are less willing to provide informative financial information. This finally lowers the quality and credibility of reported earnings in this region.

Larker and Richardson (2004) pointed out that institutional shareholders and ownership diversification are also the key governance factors that stop companies performing accruals management. As remarked by Fan and Wong (2005), a high concentration of voting rights and cash flow rights [11] leads to a high demand for high audit quality. This is to help

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[11] For example, company A owns 30% of B company limited and B company limited owns 20% of company C. Company A has voting right of about 30% in B company limited and cash flow right of about 6% (30%x20%) in company C.

companies militate against a conflict of interest between controlling and minority shareholders.

A high concentration of shareholding indicates that a firm may have a low level earnings quality (Larcker and Richardson, 2004) because the dominant shareholders may not be willing to report the truth (Fan and Wong, 2002) and might wield strong power over an auditor. Consequently, the investors of this firm requires a high audit quality (Fan and Wong, 2005).

4.4.3.1.3 EFFECTIVE AUDIT COMMITTEE

The standard of a firm's audit committee also takes an important role in promoting corporate governance and financial reporting quality. One of the most important responsibilities of the audit committee is to protect an auditor from confrontation with the management. In doing so, the key characteristic of the audit committee is their independence from their management.

Carcello and Neal (2000) provided evidence that having a high percentage of audit committee members who are affiliated with companies relates to a lesser likelihood that a financially distress firm would receive an auditor's going-concern report. Later, Carcello and Neal (2003) also found that having a high number of affiliated directors on the audit committee and an increase in the companies' stocks held by the audit committee increase the probability that audit firms would be dismissed after issuing going-concern opinions. This probability reduces if members of the client's audit committee have prior experience in corporate governance. Also, there is high turn-over among independent audit committee members after the companies received the going-concern opinions and fired their auditors. Carcello and Neal (2003) also interpreted their findings together with Carcello and Neal's (2000). They concluded that, by having a high percentage of audit committee members who are affiliated with companies, the strong influence of management on audit committee leads to the management's high propensity to pressure the auditor to express an unqualified opinion and fire the auditor who refutes to do that.

The existence of an experienced (Carcello and Neal, 2003) and independent audit committee (Carcello and Neal, 2000; Carcello and Neal, 2003) helps the auditor perform

an audit without any pressure from the management, especially when there is disagreement between the auditor and management. This indirectly promotes audit quality.

4.4.3.2 AUDIT TEAM

An audit team, who executes an audit, takes the most important role in promoting audit quality. Therefore, improving their performance directly increases audit quality. To improve the audit team's performance, audit firms should be concerned with the structure of the audit team, a review process and training as follows.

4.4.3.2.1 A WELL-STRUCTURED AUDIT TEAM

Individual scepticism is the most important characteristic of audit team members. A well-structured audit team sometimes depends on individual talent and experience. Therefore, audit team members need to be assigned into audit engagement based on their knowledge and experience and a level of the task's complexity. Jamal and Tan (2001) underscored that an individual's expertise and the level of the task's complexity influence his/her behaviours. In the case of a complicated task (e.g. control weakness task), managers have higher performance in predicting other people's decisions than seniors whilst the top seniors outperform other seniors in doing so. However, their performances are not different in the case of the low complicated task (e.g. bad-debt task).

Not only do audit firms build their expertise in audits of specific industries at a firm level, they need to develop their staff's specific industry expertise as well. The staff with specific industry expertise would increase the effectiveness and efficiency of an audit. Owhoso et al. (2002) found that with their individual industry specialisation and performance, senior assistant auditors outstrip managers in detecting mechanical errors, but, by contrast, managers outperform senior assistant auditors in detecting conceptual errors. Those seniors' and managers' performances improve well when they work together as a nominal team. However, the nominal team outperforms the real team only in detecting mechanism errors not conceptual errors. This indicates that there is a process loss resulting from output inference.

A well-structured audit team is an audit team that is comprised of staff with specific industry knowledge. Audit work must be delegated to each audit team member based on an individual's experience and a level of task's complexity.

4.4.3.2.2 EFFECTIVE AND EFFICIENT REVIEW PROCESS

To control and monitor an audit fieldwork performed by an audit team, there is a need for an effective and efficient review process. As suggested by Owhoso et al. (2002), there are advantages to a hierarchical review process by which team members with different skills and outcomes (responsibilities) work together, and there are benefits of the senior assistant auditor's review.

Similarly to Owhoso et al. (2002), Tan and Trotman's (2003) results of the experiment highlighted the importance of an auditor rank on an audit review process. They found that a reviewer's ability to detect a preparer's conclusion or documentation errors depend on the preparer's stylisation of audit working papers and tailored audit programme and his/her own intelligence and stylisation sensitivity. If the reviewers knew that the preparers' audit working papers possibly have conclusion and/or documentation errors, audit managers outperform the senior assistant auditors in detecting this type of errors. However, in the case of detecting the documentation errors, the senior assistant auditors' performances are better than the audit managers'.

A review process is less effective if an audit partner attempt to predict their subordinates' abilities to detect errors. Messier Jr. et al. (2008) reported that audit partners overestimate their managers' and seniors' ability to detect errors. This raises doubt that if the partners are overconfident in their managers' and seniors' ability to detect errors, they may not thoroughly review their audit working papers or overlook other audit issues. This leads to the detection risk. The audit partners' prediction of their managers' ability to detect error is more accurate than those of their seniors'. The audit partners accurately predict their managers' ability to detect conceptual errors (difficult/hard) and seniors' ability to detect mechanic errors (simple/easy). However, it is difficult for them to predict their subordinates' ability to detect more important and more frequent errors.

A review approach is also of crucial importance. During a review process, the name of a preparer, who completed audit working papers, should remain anonymous. This is to militate against a reviewer's bias toward the preparer's performance. As found by Tan and Jamal (2001), the identity of preparers' audit working papers should not be revealed during the review. This can reduce bias in managers' assessments of seniors' works resulting from their impressions of these seniors' prior performances. Also, this leads some managers to focus more on real performance. However, the prior performance of audit team members does not affect the outstanding managers' assessments.

An on-going review and E-review approach have been widely implemented by many audit firms. Nonetheless they may be less effective than a traditional review approach. Wilks (2002) investigated the effectiveness of on-going review approach which has replaced the traditional review approach (the sequential audit review approach). Under the on-going review process, partners and managers need to supervise their audit team frequently during audit fieldworks. Wilks (2002) concluded that the on-going review process might lead to audit errors. Since audit team members know early what partners/managers need, they will try to interpret obtained audit evidence to support conclusion that coincide with their partners/managers' views.

Brazel el al. (2004) provided evidence that although a face-to-face review is less efficient than an E-review through email because it takes longer time than the E-review, the face-to-face interview still outperforms the E-review. It increases preparers' awareness of audit effectiveness, which is evaluated from the appropriateness of their obtained audit evidence and conclusion. Their audit working papers are less influenced by prior year working papers and preparers of audit working papers feel more accountable. The face-to-face review also increases a quality of a judgement by encouraging the preparers to use a more systematic approach to evaluating current year audit evidence. Brazel el al. (2004) pointed out that E-reviews also outperform face-to-face interviews in encouraging the preparers to use a more heuristic approach that needs judgemental rules and templates. Therefore they believed that these two forms of interviews might not be exchanged with each other.

A hierarchical review performed by auditors with different ranks (e.g. senior, manager or partner), which is generally based on their working experiences, might improve the effective of the review process. As highlighted by ISA 220 *Quality Control for an Audit of*

Financial Statements, an audit firm should establish review policies and procedures based on the principle that work of less experienced members is reviewed by more experienced members. Moreover, to militate against the reviewers' bias against preparers' performance, the preparers may need to be anonymous during the review. An on-going review and/or E-review approach may not be more effective than a traditional and/or face-to-face review approach.

4.4.3.2.3 EFFECTIVE AND EFFICIENCY TRAINING

Training is necessary for staff. It directly impacts an individual's and an audit team's performance. Different forms of training may be appropriate to different circumstances. During an interview, on-the-job training is also necessary to encourage audit team members to have self-learning. Earley (2001) found that learning by either self-explanation or explanation feedback is an effective way to educate inexperienced staff. The learning by explanation feedback is the learning process where trainers provide a related explanation for learners. It helps inexperienced learners improve their performance. On the other hand, learning by the self-explanatory approach promotes the learners' self-learning. The integration of these two approaches seems to be the best way to promote the acquisition of the learning process.

For the negotiation between an audit team and an audited company on audit adjustments, the audit team members should be trained before the real negotiation. Trotman et al. (2005) concluded that having the understanding of clients' position helps auditor improve their negotiation strategies and skills. Especially, it is through a role-playing and passive training that the auditors encourage to act as their clients. The role-playing allows the auditors to have a mock before the real negotiation.

Training that encourages staff to have self-learning or role-playing help an audit firm improve an audit team's performance. However, time pressures and budget constraints may lead these two forms of training to be difficult in practice.

4.5 ATTEMPS TO PROMOTE AUDIT QUALITY AT AN INTERNATIONAL LEVEL

At an international level, IAASB under the International Federation of Accountants is the world leader in promoting audit quality. Its major responsibility is to implement auditing standards and their related guidelines and interpretations. To raise awareness of audit quality globally, IAASB issued ISA220, ISQC1 and a framework for audit quality.

4.5.1 ISA220 AND ISQC1

In 2003, IAASB first issued the drafts of the International Standard on Auditing 220: *Quality Control for an Audit of Financial Statements* and the International Standard on Quality Control 1: *Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements*. These two standards were finally announced in 2009 and should have been effective from 15 December, 2009 onwards. An auditor's responsibility for establishing and maintaining a quality control system is beyond the scope of ISA220. Under ISQC1, an audit firm also has an obligation to do so. In other words, ISA220 is at an engagement level whilst ISQC1 is at a firm level.

The quality control system must lead an audit firm and an auditor to make sure that the firm, its staff and the audit engagement comply with professional standards and related legal and regulatory requirements and that audit reports are appropriate in the circumstances. The quality control system must cover seven elements:
- leadership responsibilities for quality within firms and at an engagement level;
- relevant ethical requirements, acceptance and continuance of client relationships, specific engagement at a firm level and audit at an engagement level;
- human resources at a firm level and assignment of engagement teams at an engagement level;
- engagement performance;
- monitoring; and
- documentation of the system of quality control at a firm level and documentation at an engagement level.

4.5.2 A FRAMEWORK FOR AUDIT QUALITY

In 2011, IAASB conducted a survey of perspectives on audit quality in Australia, Canada, Germany, Japan, Netherlands, New Zealand, South Africa, the US and the UK. The respondents were all stakeholders of audits, which included audit committee members, institutional investors, senior management of larger entities, senior management of smaller entities and primary public sector users. The results of 169 surveys helped the IAASB develop the paper *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality*. The paper was officially published in February 2014. It highlights that an audit team is the foremost element in promoting audit quality and also identifies key elements that create an environment for audit quality. These elements are categorised into five key factors and three different levels as follows.

4.5.2.1 INPUT FACTORS

Values, ethics, attitudes, knowledge, skills, experience and time are the most important input factors in promoting audit quality.

4.5.2.1.1 VALUES, ETHICS AND ATTITUDES

Audit quality is associated with individuals' values, ethics and attitudes. At an engagement level, an audit partner should take a major role in promoting audit team members' values, ethics and attitudes. He/she needs to ensure that audit team members attach significance to the applicable ethical requirements. An audit firm's culture is the most important firm level attribute that impacts individual's values, ethics and attitudes. In doing so, the audit firm needs to create a culture that highlights the importance of audit quality. Therefore, there is a need for governance management that should have an appropriate *tone at the top* and a policy on protecting the firm's independence. There should be a promotion policy that encourages staff to promote audit quality. The firm's financial considerations should not allow any decisions and actions that might undermine audit quality. There should be sufficient training programmes for continuing professional development and technical supports that help the firm promote audit quality. The audit firm also needs to create a culture of consultation and implements a system that rechecks the procedure for accepting and continuing clients. At a national level, national audit regulatory policies and

enforcement significantly affect audit firms' cultures and individuals' values, ethics and attitudes. There should be a need for the promulgation of clear ethical requirements, an active regulator and professional body and sharing information that is useful for client continuance and acceptance among audit firms.

4.5.2.1.2 KNOWLEDGE, SKILLS, EXPERIENCE AND TIME

To perform an audit fieldwork, audit team members should have sufficient knowledge, skills, experience and allocated time. Therefore, audit partners' and audit team members' competency, understanding of client business, sufficient experience, appropriate judgement and giving sufficient time to perform an audit are very important attributes at an engagement level. In addition, the audit team members should be supervised, directed and reviewed on a timely basis. The audit partner and experienced audit team members should easily access audited company's management or those charged with governance. At a firm level, the key attributes are a well-structured audit team, timely appraisals of staff performance, appropriate coaching or *on-the-job* training, training in audit, accounting and specialised industry issues and sufficient time to complete audit work. Whilst effective processes for issuing licenses to auditors/audit firms, well-defined education requirements and sufficient resources of training, training programmes about current issues and updates on new professional requirements, a good reputation of auditing professionals that attracts and maintains high-quality people are the key attributes at a national level.

4.5.2.2 PROCESS FACTORS

At an engagement level, audit team members should perform an audit that complies with their firm's quality control procedure and laws, regulations and applicable standards. Information technology should be implemented. Effective interaction with other parties and appropriate arrangements with audited companies' management are necessary. Audit methodology is the most important factor at a firm level. It should comply with professional standards and be amended to the results of internal control reviews and external inspections. Audit methodology should encourage audit team members to exercise their professional judgement and professional scepticism. It should also require auditors to have appropriate audit documentation. Effective supervision and review of an audit work, including quality control procedures and a quality control review, should be in place. Clear

auditing standards, inspections of audit firms performed by the independent regulator, effective systems for investigations of audit failures and appropriate actions are the key attributes that could promote quality of the audit process at a national level.

4.5.2.3 OUTPUT FACTORS

The usefulness and timeliness of reports are the key measures used to evaluate outputs of an audit at each level. The outputs at an engagement level should include the outputs from an auditor, an audited entity and audit regulators. Those outputs from the auditor are his/her reports to other stakeholders. Audited financial statements and the reports from those charged with governance are the outputs from the audited entity. The output from the audit regulators is information on individual audits. The outputs at a firm level are the issuances of audit firms' transparency reports and annual reports. At a national level, the outputs are the results and findings of audit firm inspections that are available to the public.

4.5.2.4 INTERACTION FACTORS

There is a need for effective interactions among all stakeholders. These interactions are:
- the interactions between auditors and management, those charged with governance, users and regulators;
- the interactions between management and those charged with governance, users and regulators;
- the interactions between those charged with governance and users and regulators; and
- the interactions between users and regulators.

These interactions can also be in many forms for example, two-way communication, discussion, cooperation, open dialogue, attendance at meetings and providing or sharing information.

4.5.2.5 CONTEXTUAL FACTORS

Ten contextual factors that impact on audit quality are identified. These factors are:
- business practices and commercial law;

- laws and regulations relating to financial reporting;

- the applicable financial reporting framework;

- information systems;

- corporate governance;

- broader cultural factors;

- audit regulation;

- the litigation environment;

- attracting talent; and

- the financial reporting timetable.

These ten contractual factors would help countries create a good environment for good audit quality.

ISA220, ISQC1 and a framework for audit quality issued by IAASB are expected to be the key mechanisms to promote audit quality at an international level. However, some countries have delayed implementing these standards. The relevant authorities still need time to translate the standards from English into their respective languages and also to educate the necessary people about the standards. The next section will give example projects that have investigated audit quality at a national level.

4.6 INVESTIGATIONS OF NATIONAL ACCOUNTING AND AUDITING ENVIRONMENT

Accounting and auditing environment significantly influence audit quality at a national level, especially the impact of a country's accounting and auditing standards and corporate governance on audit quality. The degree to which a country's accounting and auditing standards harmonises with international accounting and auditing standards and the extent to which its corporate-governance standards have improved are investigated.

4.6.1 ROSC's OBSERVATION OF NATIONAL STANDARDS

The Report on the Observance of Standards and Codes (ROSC) is a joint project between the International Monetary Fund and the World Bank. The project aims to observe the extent to which countries' standards comply with international ones. Accounting and

auditing is one of twelve areas that are observed. The assessment is done by using the template developed and revised by the Organisation for Economic Co-operation and Development (OECD). The template provides a checklist of whether the International Accounting Standards Board (IASB)'s Framework for the Preparation and Presentation of Financial Statement, 29 IASs and seven IFRSs were adopted in full without amendments. (The International Monetary Fund, 2013)

The observations are performed as three stages: initial assessment, reassessment and update. Participants include emerging market countries, advanced economic countries and developing countries. The observations of Indonesia were done in 2005 and 2010. Those of the Philippines were conducted in 2001 and 2006. Thailand and Malaysia were evaluated in 2008 and 2011, respectively. (The World Bank, 2013)

4.6.2 ACGA's ASSESSMENT OF CORPORATE GOVERNANCE

The Asian Corporate Governance Association (ACGA) is an independent, non-profit organisation. Its work is to assess the effectiveness of corporate governance practices in eleven Asian countries: China, Hong Kong, India, Indonesia, Japan, Korea, Malaysia, the Philippines, Singapore, Taiwan and Thailand. Assessment is conduced once every two years. The tool of assessment is a 90 question survey. The total score is the average of all 5 elements, which are CG rules & practice, enforcement, political & regulatory, IGAAP (accounting and auditing) and CG culture. The part of IGAAP comprises of 15 questions. The score is Y=Yes (+1 point), L=Largely (+0.75 point), S=Somewhat (+0.5 point), M=Marginally (+0.25 point) and N=No (0 point).

Table 5 below shows the results of the ratings of IGAAP conducted in 2007, 2010 and 2012. In Southeast Asia, Singapore received the highest score in the accounting and auditing section. Thailand had an improvement in score over the period. Although its score was behind Malaysia and the Philippines in 2007 and 2010, Thailand was equal to Malaysia and higher than the Philippines in 2012. The Philippines' and Indonesia's scores slightly dropped in 2012. (The Asian Corporate Governance Association, 2012).

Table 5: Results of ACGA's Assessments

| | IGAAP | | |
	2007	2010	2012
Indonesia	65	67	62
Malaysia	78	80	80
Philippines	75	75	73
Thailand	70	73	80
Singapore	88	88	87

Source: The Asian Corporate Governance Association (2012)

The assessments of accounting and auditing environments conducted by many projects and organisations could be one measure of audit quality at a national level. A country with a strong accounting and auditing environment is perceived to have a higher audit quality than others.

4.7 SUMMARY

This chapter provides the concept of audit quality based on recent evidence from previous studies that were published in leading accounting and auditing journals. Audit quality is generally defined as an auditor's ability to detect material misstatement. Prior studies also generally used ex-post quantitative data of an audit to measure audit quality, for example discretionary accruals, an audit report, a restatement of prior year's financial statements. Nonetheless audit quality is deemed to be a subjective term that is difficult to be defined and measured.

To promote audit quality, at a national level, the transformation of the accountancy profession from self-regulation into independent institution-regulation and auditor liability and penalties for audit failure may be necessary. Regulatory audit firm inspection, a policy on investor selection of an auditor, a restriction on the employment of the current audit firms' former partners/managers, a ban on non-audit services and a mandatory audit firm/audit partner rotation are perceived to be the effectiveness of mechanisms to control and monitor auditors and audit firms.

At a firm level, auditor reputation and expertise in audits of specific industries are key factors that drive an audit firm to maintain or improve its audit quality. Audit firms may need to develop their audit methodologies to be appropriate to their staff characteristics. Modern audit and risk strategies should be in place. Audit entities and audit teams are important factors in promoting audit quality at an engagement level. Audited entities' size, shareholding structure and audit committees might influence the audit process. Quality audit stems from a well-structured audit team, effective and efficient review and appropriate training.

At an international level, ISA220, ISQC1 and *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality* issued by the IAASB seem to be the most important mechanisms to raise awareness of audit quality. Whilst the assessments of a country's accounting and auditing performed by the ROSC and ACGA help us ascertain whether a country's accounting and auditing standards are effective and how their standards could be improved.

An audit is perceived to be the key feature in the financial reporting process that helps users of financial information to have more confidence in the financial information published by an audited company. Therefore, previous studies paid attention on how to promote audit quality. This thesis also adds to the literature on audit quality. However, it focuses on the association between earnings management and audit quality, which will be discussed in the next chapter.

CHAPTER 5

EARNINGS MANAGEMENT AND AUDIT QUALITY

5.1 INTRODUCTION

Chapter 3 provides the concept of earnings management whilst Chapter 4 summarises the concept of audit quality. This chapter will link these two concepts together. It is organised as follows. Section 5.2 discusses how an auditor may take actions to earnings management. It also covers the materiality concept and audit report concept that will be used to develop a new measure of audit quality. Section 5.3 identifies factors that influence audit quality and will be tested in this thesis. This section also broadens the literature review to recent studies that tested the association between earnings management and audit quality. Section 5.4 provides the summary of this chapter.

5.2 AUDITOR AND EARNINGS MANAGEMENT

A firm's management may have many incentives to manage reported earnings. If a management team has the intention of engaging in earnings management, they may select an auditor who is more flexible or an auditor who has a low audit quality. On the other hand, an auditor himself/herself also has the right to accept or reject a client if he/she can anticipate that his/her client is suspected of engaging in earnings management. This helps him/her mitigate the audit risk that arises from misreporting. Misreporting is, for example, the likelihood that the auditor draws a clean opinion even though the financial statements contain a material misstatement or the likelihood that the auditor expresses an unclean opinion although there is none of material misstatement.

However, in reality, it is difficult for an auditor to anticipate that his/her client is engaged in earnings management unless there is a clear evidence for his/her client's earnings management. Importantly, earnings management may be or may not be detected by an auditor during an audit and/or the impacts of detected earnings management may be or may not be removed from financial statements by an auditor and/or an audited company. Auditor-client reactions to earnings management could be illustrated as follows.

- First, the management does not engage in earnings management; therefore, an auditor issues an unqualified audit report which indicates that financial statements provide a true and fair view of a company's financial position and performance. This should be the ideal case.

- Second, a quality audit occurs when an auditor can detect earnings management and the management is willing to correct financial statements. Then, the auditor issues an unqualified audit report.

- Third, the management resists correcting the financial statements but he/she allows an auditor to issue a qualified audit report. This is still beneficial to the auditor.

- Fourth, not only does the management resist correcting the financial statements, they also forbid an auditor from issuing a qualified audit report. Hence, the auditor withdraws him/herself from the audit engagement.

- Fifth, an auditor chooses to express an unqualified opinion even though the management ignores the auditor's corrections of financial statements. This is because the auditor is under pressure from the management to issue an unqualified report or is able to compromise with the management.

- Sixth, an auditor neglects to correct financial statements. Even though earnings management is found, the auditor does not propose any adjustment to the financial statements. This is because the auditor worries that the disagreement with a client's management leads him/her to lose this client, especially when the client is an important client to the auditor.

- Seventh, an auditor fails to detect earnings management.

These seven scenarios of auditor-client reactions to earnings management present both positive and negative aspects of an audit. The first four situations are the best cases of an audit, in contrast to the fifth, the sixth and the seventh circumstances that are defined as audit failures. In reality, it is not easy to indicate which cases most frequently occur because the audit process is not available for observation. Even though a large volume of audit evidence is collected by an auditor, the audit report attached to the financial statements that are finally distributed to users is only a few pages long.

An audit report and a set of financial statements are available for all the public to use to evaluate an auditor's performance. Empirical studies generally reveal the failures of audits by observing the audit reports. Bradshaw, Richardson and Sloan (2001) reported that an

auditor report or an auditor change is not a red flag or a sign of future decline in earnings and GAAP violations associated with high accruals. Defective audits are found even in the case of clean opinions. Butler, Leone and Willenborg (2004) found that firms with unmodified opinions reported higher abnormal accruals that those with modified opinions.

In this thesis, audit reports and financial statements are used to observe the association between earnings management and audit quality. A level of discretionary accruals, which is estimated from the audited financial statements, is a proxy for earnings management. The lower the level of discretionary accruals the financial statements with an unqualified audit report has, the higher the audit quality. To measure audit quality by using both audit report and level of discretionary accruals, the materiality level and type of audit report are needed to be considered.

5.2.1 MATERIALITY

As noted by Porter, Simon and Hatherly (2008), materiality is one of the key concepts in the auditing process. ISA 320: *Materiality in Planning and Performing an Audit* defines the term *materiality* based on its definition that was provided by the IASB's Conceptual Framework for Financial Reporting. According to ISA320's definition of the term *materiality*, in the context of an auditor, information is considered to be material if its incorrectness or omission, in itself or overall, is able to affect decisions made by using this information. Judgements are the crucial factor in considering materiality in terms of its size, nature, and effects on the users of financial statements.

ISA320 also identifies two levels of materiality: materiality for the overall financial statements and materiality for specific classes of transactions, account balances or disclosure. In considering quantitative materiality for the overall financial statements, an auditor has to exercise professional judgement in setting a percentage of materiality level and in selecting a benchmark. Sometimes setting quantitative materiality for the overall financial statements also depends on the audit firm's policy, practice and even culture. The benchmarks for setting quantitative materiality are, for example, the component of the financial statements (e.g., assets, liabilities or equity); the items that are the focus of financial statement users (e.g., profit, revenue or net assets); and so on. The quantitative materiality level for overall financial statements is the result of multiplying selected

percentage and benchmark, for example 5% of total assets before auditing. The second level is for a specific area where an auditor is aware of its potential influence on the decision made by the users of financial statements.

In general, error or misstatement found by audit team members with a magnitude above materiality level is required to be adjusted. However, error or misstatement with a magnitude below both materiality levels will be summarised as an unadjusted item. An auditor also needs to consider the final impact of all these unadjusted items on financial statements. Finally, they might need to be adjusted if their aggregate impact is above the materiality level for the overall financial statements.

Selecting the percentages and benchmarks for setting materiality is problematic in practice. The study in Australia conducted by Iselin and Iskandar (2000) used the per cent effect of net profit as a level of materiality. Nelson, Smith and Palmrose (2005) used the percentage of pre-tax net income as the level of materiality to conduct an experiment on auditors' adjustment decisions in the US. Porter et al. (2008) conducted surveys of Big 4 and three middle-tier firms in New Zealand in 2007. 0.5%-3% of sales were normally used as level of materiality followed by 5%-10% of net profit before tax, 1%-10% of shareholders' funds and 0.25%-2% of total assets.

Since earnings management though discretionary accruals leads to financial statements not being presented fairly, an auditor is required to propose an adjustment and/or to modify his/her audit report, if necessary. The author presumes that the adjustment for the impacts of earnings management on the financial statements or the modification of an audit report depends on the auditor's judgement, the magnitude of discretionary accruals and the level of materiality.

5.2.2 AUDIT REPORT

According to ISA 700: *Forming an Opinion and Reporting on Financial Statement*, the standard pattern of an audit report is issued if an auditor draws an unmodified opinion. This means that the preparation and the presentation of the financial statements, in all material respects, comply with the applicable accounting framework. As this thesis uses discretionary accruals as a proxy for earnings management and a measure of audit quality,

an auditor can issue the unqualified audit report if the level of reported discretionary accruals is below his/her audit materiality level. The author therefore assumes that financial statements with an unmodified opinion should have the magnitude of reported discretionary accruals that is less than the level of audit materiality. This implies high audit quality.

However, the auditor might need to modify his/her opinion on financial statements if the impact of earnings management significantly alters his/her opinion. In other words, the modification of audit opinion might indicate that the magnitude of discretionary accruals is greater than the materiality level. This also implies high audit quality. According to ISA 705: *Modifications to the Opinion in the Independent Auditor's Report*, the modified opinion can be in the form of a qualified opinion, an adverse opinion or a disclaimer opinion. The author therefore hypothesises that these four types of audit opinion are associated with high level of discretionary accruals.

Moreover, the author also suspects that financial statements with an unqualified opinion and an additional paragraph are also associated with high level of discretionary accruals. ISA 706: *Emphasis of Matter Paragraphs and Other Matter Paragraphs in the Independent Auditor's Report* guides that an auditor may add matter paragraphs in the auditor's report in order to draw the users' attention to important information highlighted by the auditor and to make users gain more understanding of the audit, the responsibility of the auditor and the auditor's report. These matters are, for example an uncertainty regarding the future consequence of exceptional litigation or regulatory action, early adoption of the accounting standards that are legally permitted and an important disaster that has had material impact on the company's financial position. Even though ISA706 shows that these paragraphs do not affect the auditor's opinion on the financial statements, the author believes that these matters could be evidence that the management of the audited company might use accounting and accruals choice in their financial reporting.

To summarise Section 5.2, audit quality could be observed through auditor-client reactions to earnings management. The joint association between types of audit opinion and a level of discretionary accruals is used to investigate auditor-client reactions to earnings management. The author assumes that financial statements with an unqualified audit report should have the magnitude of discretionary accruals that is below the materiality level.

However, those with modified audit reports should have the magnitude of discretionary accruals that is above the materiality level. This indicates high audit quality.

5.3 FACTORS THAT INFLUENCE AUDIT QUALITY

The previous section developed a measure of audit quality. It is believed that audited financial statements with an unqualified audit report should have a low level of discretionary accruals. This indicates high audit quality. This section focuses on factors that previous studies tested their influence on audit quality. Even though Chapter 4 identified many national, firm and engagement level factors in promoting audit quality, this thesis will focus primarily on some of those national, firm and engagement level factors as follows.

5.3.1 INVESTOR PROTECTION

Empirical studies tested the influence of a country's investor protection on accruals accounting (Hung, 2001), earnings management (Leuz et al., 2003; Haw, Hu, Hwang and Wu, 2004) and earnings quality (Francis and Wang, 2008). None of the evidence indicates the direct association between this national level factor and audit quality.

Hung (2001) investigated how levels of investor protection impact on a country's accrual accounting and value relevance of financial information. The analyses are from the data of 17,743 non-financial, firm-year observations of 21 countries covering the period from 1991 to 1997. Unlike other studies that use cash flows as a measure of earnings' value relevance, Hung (2001) used each country's accruals system. Earnings and return on equity are used as the gauge of a company's performance. Institutional factors, which are put into the regression equation, are anti-director right index, type of legal system, accruals index and tax-book conformity index. Hung's (2001) anti-director right index ranges from zero to five. It is considered, for example, from a country's system of shareholder voting and the right of minority shareholders to sue the directors. Countries with common laws are defined to have a stronger investor protection than those with code laws. This is due to the origins of these legal systems. Hung (2001) classified types of legal system into common and code laws. Common laws (e.g. the US and the UK) are suitable for a contract among a large group of people and parties. The companies then depend on public shareholders and creditors. Code laws (e.g. France and Germany) are appropriate for a

contract between a small numbers of parties. The companies depend on managers, banks, employees and government. Hung (2001) assumed that the more the country uses accruals accounting, the more the companies engage in opportunistic activities that reduce the value relevance of earnings. However, this impact is attenuated when investors are under strong protection (common-law system or high anti-director right).

The limitations of Hung's (2001) study for this thesis's purposes are that most sample countries are developed countries, for example the US, the UK, Australia and Japan. The study's findings may not apply to emerging economies. The use of the accruals index and tax-book conformity index developed in other studies seems to be problematic. The computation of the accruals index, for which the maximum score is 1, is based on only 11 questions of accruals accounting treatments. The question is, for example, whether or not purchased intangibles are capitalised. If so, the score is 1. If not, the score is 0. Then the score is weighted by 1/11. The comparison of accruals accounting practices across countries must be done thoroughly; therefore, it should be a standard-to-standard comparison. The study also ignores the adoptions of the US accounting standards and the international accounting standards.

The tax-book conformity index is transformed from the score that evaluates the differences between a country's accounting practices and its tax practices. The evaluation is based on six questions. The question is, for example, the degree to which the tax book and accounting book are different. The score is 1 if the difference is strong, 0.5 if the difference is moderate and 0 if the difference is weak. The score is then weighted by 60%. One other question is weighted by 20% whilst the remainders are weighted by 5%. To assign this tax-book conformity index as a binary variable, 0 is used as the cut point. The index is coded as 1 if the score is greater than zero, and 0 otherwise. The evaluation of this index is a subjective judgement and might attenuate the reliability of the study's findings.

Leuz et al. (2003) tested the association between levels of investor protection and earnings management across 31 countries around the world. By cluster analysis, these countries are then categorised into three groups: strong investor protection country, weak investor protection country and the middle between these two groups. The cluster is based on five main institutional factors: the size and development of the stock market, the concentration of ownership, investor's rights, disclosure index and legal enforcement. Four country-level

measures of earnings management are developed[12]. The study concludes that strong investor protection is associated with a low level of earnings management.

Since there is still no clear definition of earnings management and no precise measure of it, Leuz et al.'s (2003) findings should be interpreted with care. In addition, Leuz et al. (2003) found correlations among their institutional variables. They then raised the issue that there should be a need for more understanding of how each institutional factor is associated with the others. Leuz et al. (2003) also ignore the influences of other accounting environment, for example the development of the accountancy profession in each country during 1990-1999. Considering the influences of other institutional variables might be necessary to identify the association between the level of investor protection and earnings management. For example, the disclosure index, which is borrowed from another study, might be outdated. This index was from the assessment of 1990 annual reports. The development of the accountancy profession in each country during 1990-1999 might significantly impact this index. Moreover, Leuz et al. (2003) used after-tax earnings scaled by total assets to define small-loss or small-profit observation. The small-loss observation is an observation that has after-tax earnings scaled by total assets in the range [-0.01,0.00). Whilst small-profit observation is one that has after-tax earnings scaled by total assets in the range [-0.01,0.00). Therefore, the validity of Leuz et al.'s (2003) interpretations of their findings also depends on the effectiveness of their cut-off point of small-loss or small-profit observation.

Haw et al. (2004) conducted the study on the extent to which legal factors can protect minority shareholders from income management undertaken by the controlling shareholders. The absolute value of cross-sectional Jones discretionary accruals is used as a proxy for earnings management. A sample is 20,210 firm-year observations during the period 1996-1999 from nine countries in East Asia and 13 countries in Western Europe. The legal factors comprise legal institutions and extra-legal institutions. The legal institutions include the type of legal tradition common/code law, the anti-director index, the efficiency of legal system, the rule of law index and the disclosure index. These five legal institutions' index or score are based on La Porta, Lopez de Silanes, Shleifer and Vishny (1998). The specific legal institutions are the effectiveness of competition law, the

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[12] For a detailed measure of earnings management, see Leuz et al. (2003).

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tax compliance rate, the circulation of daily newspapers divided by population. These three specific legal institutions are derived from Dyck and Zingales (2004). Haw et al. (2004) provides evidence that both legal institutions limit earnings management induced by the ultimate shareholders who gain control from both direct and indirect share-holding. Common law tradition and the efficiency of legal system outperform other legal institutions. The tax compliance score outperforms other extra-legal institutions and even legal tradition and the efficiency of the legal system. However, the presumption that auditors help detect earnings management or accruals management is likely to be neglected by Haw et al. (2004). Therefore, the variables relating to auditors are omitted from the study's models.

Wysocki (2004) commented that the single measure of earnings management used by Haw et al. (2004) can impair their findings since the measure of earnings management remains debatable. An additional test on the association between earnings management and tax compliance is performed by Wysocki (2004). Two regressions are used to test the influence of level of corruption and other intuitional factors on tax compliance score. A country's corruption perception index assessed by the Transparency International is introduced into the models of Wysocki's (2004) study. The index ranges from zero to ten. A greater score indicates that a country has lower level of corruption. Wysocki (2004) reported the negative relation between the level of corruption and the tax compliance score. In addition, Wysocki (2004) contended that a high level of investor protection and good quality accounting standards rather than tax compliance can limit earnings management.

Francis and Wang (2008) used a sample of 49 countries and covered the period from 1996 to 2004. Signed abnormal accruals, the incidence that firms report negative income before extraordinary items and earnings per share before extraordinary items are three measures of earnings quality. The study does not use the cross-sectional version of abnormal accruals but uses the previous year's abnormal accruals as a benchmark to estimate the current year's accruals. The difference between the actual current year's accruals and the estimated accruals is abnormal accruals. This means that Francis and Wang's (2008) estimation of discretionary accruals is then based on individual companies and specific accounting practices in each country. They believe that the cross-sectional version of abnormal accruals might have an error when the number of industry observation per country is small. Five proxies of investor protection are tested. These proxies of investor

protection are (1) type of legal tradition, (2) the index of the degree to which minority shareholders can have the right to stop any manager's or dominant shareholder's opportunistic activities that would be done at the expense of them, (3) the index of country's disclosure requirement for listed companies, (4) the index of liabilities that investors can claim for any incorrect disclosures at the time that listed companies traded their stocks and (5) the index of how effective standard setters and regulators of that country are.

Francis and Wang (2008) found that only clients of big 4 firms under stricter regulation have a high level of earnings quality. They also believed that stricter regulation leads auditors to have incentives to force their clients to report high quality earnings. These provide evidence that the big 4 firms are not homogeneous in terms of audit quality and have different practices across different investor protection regimes. Francis and Wang (2008) also pointed to the fact that the harmonisation of auditing standards would not be successful if there is no change in institutional factors that influence auditors' motivation.

Francis and Wang (2008) estimated accruals based on the previous year's accruals. This estimation of accruals is possibly in error if the base year (previous year) has unusual economic circumstances, for example an economic crisis. The estimation is also based on individual companies' accounting practices and specific accounting practices in each country; therefore, the study does not test how the adoption of the international accounting standards in those countries impact on earnings quality. The author views that the cross-sectional version of abnormal accruals can possibly capture this impact. This is because the assumption of the estimation is that companies in the same industry across countries must have the same accounting practices.

Francis and Wang (2008) used measures of institutional characteristics developed by La Porta, Lopez de Silanes, Shleifer and Vishny (1997) and La Porta et al. (1998) whilst the sample of the study covers the period from 1996 to 2004. This creates a short gap in time from 1997/1998 to 2004, in which there would possibly be significant changes in the institutional environment in the sample countries.

In sum, there is empirical evidence indicating the influence of institutional factors on financial reporting process. Strong investor protection, which can be seen as the common-

law system or high anti-director right, can mitigate the likelihood that listed companies would engage in opportunistic activities through accruals accounting (Hung, 2001). A lower level of earnings management is found in countries that have strong investor protection (Leuz et al., 2003). Francis and Wang (2008) add a new conclusion to the literature that stricter regulation drives auditors to be more concerned with their clients' quality of earnings and big 4 firms are more effective only under stricter regulation.

5.3.2 AUDIT FIRM TYPE

Recent studies also investigate the association between audit quality and audit firm type. Becker, DeFond, Jiambalvo and Subramanyam (1998) conducted a study of US companies. Bauwhede, Willekens and Gaeremynck (2003), Jeong and Rho (2004) and Piot and Janin (2007) broadened the evidence to Belgium, Korea and France, respectively. Whilst Maijoor and Vanstraelen (2006) provided a comparative evidence for France, the UK and Germany. In these studies, accruals are used to gauge audit quality and audit firms are labelled as big firms or non-big firms.

Becker et al.'s (1998) results supported the general notion that a big firm has higher audit quality than a non-big firm. However, other studies provide contradictory findings to Becker et al. (1998). Bauwhede et al. (2003) found that, in Belgium, reputable auditors help militate against income-increasing earnings management but not income-decreasing earnings management. Jeong and Rho's (2004) Korean sample and Piot and Janin's (2007) French sample indicate that there is no difference in audit quality between a big and a non-big audit firm.

Bauwhede et al. (2003), Jeong and Rho (2004) and Piot and Janin (2007) believed that their findings contradict the US studies because the economic and auditing environment in Belgium, Korea and France significantly differ from the US. The differences are, for instance, the legal systems, the accounting and auditing systems, low demand for high audit quality, a low incidence of regulatory inspection, and a low risk of auditor litigation. Maijoor and Vanstraelen (2006) highlighted that a strict audit environment, instead of audit firm type, can reduce the magnitude of managed accruals.

Major drawbacks of these studies are that Becker et al.'s (1998) and Maijoor and Vanstraelen's (2006) testing equations generate a low adjusted R^2 which can indicate a low reliability of their models. Becker et al.'s (1998) models generated adjusted R^2 at around 1% for regressing all sample and 8% for regressing year-to-year sample. Whilst Maijoor and Vanstraelen's (2006) models reported adjusted R^2 at around 7%. Bauwhede et al. (2003) and Jeong and Rho (2004) have small sample size. In addition, there is the difference in their methods to estimate discretionary accruals and the importance of their decisions on whether to use signed or unsigned discretionary accruals as a dependent variable. The use of signed or unsigned discretionary accruals to indicate the difference in audit quality between a big firm and a non-big firm is likely to be problematic. This is because it ignores the materiality concept.

This thesis does not observe audit quality just through the audit firm type. It also investigates the switching audit firm type and audit firm type tenure. Becker et al. (1998) and Kim et al. (2003) used two dummy variables to indicate whether it is the first or the last year audit. Kim et al. (2003) found that discretionary accruals are significantly negative before changing audit firm type. However, Becker et al. (1998) reported that discretionary accruals are significantly negative in the first year after changing audit firm type. Contrary to Becker et al. (1998) and Kim et al. (2003), Jeong and Rho (2004) found the insignificant effect of switching audit firm between types of audit firm on discretionary accruals in Korea. The findings of Becker et al. (1998), Kim et al. (2003) and Jeong and Rho (2004) can be evidence that we may observe audit quality through a change in audit firm and a different pattern of a change in audit firm. If there is difference in audit quality between types of audit big/non-big firm, a change in audit firm type can capture this difference. In addition, difference in audit quality of firms within the same type of audit big/non-big firm can be reflected in audit firm type tenure. If there is no difference in audit quality of firms within the same type of big/non-big firm, long audit tenure does not affect audit quality. Moreover, if there is a difference in audit quality between types of audit big/non-big firm and a big firm is of higher audit quality than a non-big firm, long audit-big-firm tenure should outperform long audit-non-big-firm tenure.

At a firm level, this thesis focuses only on the impact of audit firm type on audit quality because the author is unable to obtain data of audit firms' audit methodologies and risk strategies, which are also important firm-level factors in promoting audit quality as found

in Chapter 4. Audit firm's expertise in an audit of a specific industry is out of the scope of this thesis. This is because there remains an unclear cut-off point that helps us distinguish the audit firms with expertise in an audit of a specific industry from others. The next section will focus on engagement level factors that might be necessary to control their impacts on audit quality.

5.3.3 ENGAGEMENT LEVEL FACTORS

At an engagement level, an audit team and an audited company are the crucial factors in improving audit quality as discussed in Chapter 4. Since the author is unable to assess the effectiveness of the audit team's training and review processes, factors that are related to audit teams' training and review processes are omitted from this thesis's observation. Audited companies' shareholding structure and audit committees are also not included in this thesis because of inaccessible data. An audited company's performance, leverage and size are used to control the influence of engagement level factors on audit quality.

5.3.3.1 AUDITED COMPANY PERFORMANCE

Kothari et al. (2005) found the effect of firm performance measured by return on assets (ROA) on discretionary accruals. Reichelt and Wang (2010) controlled firm performance through ROA to gain more understanding of the association between audit quality and earnings management. This thesis will also use ROA to indicate whether audited companies are facing a going-concern problem. A negative ROA resulting from a huge loss may be a sign of the audited company's going-concern uncertainty. This may lead an auditor to suspect its inability to run its businesses in the future and, in turn, to issue a modified opinion even if an audited company reports a low level of discretionary accruals.

5.3.3.2 AUDITED COMPANY LEVERAGE

Empirical studies used debt to equity ratio (DtoE) to control the effect of leverage on discretionary accruals. Becker et al. (1998) and Jeong and Rho (2004) concluded that financially distressed firms have an incentive to reduce reported earnings in order to take advantage of renegotiating debt agreements. However, Bauwhede et al. (2003) and

Maijoor and Vanstraelen (2006) did not find the association between leverage and their study's indicators of earnings management. Poit and Janin (2007) show mixed results. Bauwhede et al. (2003), Maijoor and Vanstraelen (2006) and Poit and Janin (2007) used debt-to-equity ratio as a measure of leverage while Becker et al. (1998) and Jeong and Rho (2004) used a dummy variable to distinguish high leverage firms from other firms.

The use of a dummy variable (0 and 1) to distinguish high leverage firms from other firms might be ineffective if we use an improper cut-off point. For example, Becker et al. (1998) and Jeong and Rho (2004) defined a firm that falls in the highest decile of leverage as the high leverage firm. To address this issue, this thesis will observe the influence of audited companies' leverage on audit quality by DtoE, which the sum of long-term debt and its current portion divided by stockholders' equity. Similarly to a huge negative ROA, a high DtoE or a negative DtoE may be a sign that an audited company is suffering from going-concern problem. The auditor therefore may need to modify his/her opinion, if appropriate.

5.3.3.3 AUDITED COMPANY SIZE

Previous research has also been concerned with the effect of firm size on accruals choice (e.g., Johnson et al., 2002; Kim et al., 2003; Myers et al., 2003; Maijoor and Vanstraelen, 2006; Poit and Janin, 2007). They used the natural logarithm of total assets (natTA) to control for this effect. However, they provided contradictory findings. Maijoor and Vanstraelen (2006) and Poit and Janin (2007) reported a negative relationship between natTA and their dependent variable. Maijoor and Vanstraelen (2006) concluded that large companies engage less in earnings management.

Bauwhede et al. (2003) and Jeong and Rho (2004) found a positive correlation between natTA and discretionary accruals. Jeong and Rho (2004) pointed out that large firms have a higher propensity to engage in income-increasing earnings management than small firms. However, the study of Becker et al. (1998) did not find a relationship between natTA and a signed value of discretionary accruals.

5.4 SUMMARY

Much of what we have known about audit quality is only our perception of it. This perception relates to auditor scepticism, independence, reputation, specific industry specialisation and length of auditor-client relationship. Researchers are not allowed to observe audit fieldworks (or audit processes), with the result that they generally use all these subjective indicators as proxies for audit quality. They then seek reasonable measures of these subjective characteristics and employ regression equations or econometric models to decide the causal relationship between these variables and audit quality. These quantitative methodologies seem to provide a surface understanding of audit quality. In other words, audit quality may be too complicated to be understood by using only quantitative methods.

This thesis will add multinational evidence to a literature that explores and tests the influence of investor protection and other institutional factors associated with accounting environment on audit quality. It will provide evidence from Southeast Asia in the following contexts.

5.4.1 HOW DO AUDIT FIRM TYPE AND INVESTOR PROTECTION INFLUENCE AUDIT QUALITY?

The existing evidence for the relationship between audit firm type and audit quality still provides varying results. Importantly, the perception that a big 4/5/6/8 firm is of higher quality than other audit firms continues to exist (e.g. Becker et al., 1998; Pittman and Fortin, 2004; Mansi et al., 2004). Focusing only on numerical discretionary accruals without being concerned with the materiality concept possibly misleads researchers into the difference in audit quality between a big firm and a non-big firm. In general, empirical studies believed that a high level of discretionary accruals indicates a defective audit. For example, Becker et al.'s (1998) US evidence showed that discretionary accruals of clients audited by a non-big 6 auditor are, on average, 1.5-2.1% of lagged total assets, higher than those audited by a big 6 auditor. This leads Becker et al. (1998) to conclude that the reputable big firm has higher quality than other audit firms.

To measure audit quality, this thesis does not focus only on a level of discretionary accruals but also consider an audit report and materiality level. It is believed that reported earnings containing discretionary accruals do not always indicate that audit quality is impaired. In the case of immaterial discretionary accruals, an auditor can draw an unqualified opinion even if those immaterial discretionary accruals are not removed. With this concept, this thesis develops a new measure of audit quality.

This thesis also tests the extent to which investor protection impacts on audit quality. As reported by Leuz et al. (2003), listed companies in high-level investor protection countries (e.g., Singapore, Malaysia) have a low level of earnings management, but, by contrast, those in low-level investor protection countries (e.g., Thailand, Indonesia and the Philippines) have a high level of earnings management. Leuz et al.'s (2003) evidence could indicate audit quality of audit firms in this region. The higher the level of investor protection the country has, the higher the audit quality.

5.4.2 PERSPECTIVES ON AUDIT QUALITY AND ITS ASSOCIATION WITH EARNINGS MANAGEMENT

As this thesis raises the issue that only quantitative research may not provide a thorough understanding of audit quality, the author therefore conducts a qualitative study on audit quality and its association with earnings management. This is to explore how all stakeholders of audits see earnings management and audit quality and whether auditors are responsible for detecting earnings management. Importantly, conducting qualitative research might help the author identify other institutional factors that influence audit quality and have not tested by previous studies yet.

5.4.3 NATIONAL LEVEL FACTORS THAT IMPACT AUDIT QUALITY

Owing to the limitation to data collection, some national, firm and engagement level factors in promoting audit quality identified by Chapter 4 will not be included in this thesis. At a national level, this thesis focuses primarily on investor protection and other factors identified by performing the qualitative study. It also observes and controls for the influence of firm and engagement level factors on audit quality. At a firm level, since the author cannot access data of audit firms' audit methodologies and risk strategies and the

concept of audit firm's expertise in an audit of a specific remains unclear, only audit firm type is used to observe the influence of firm level factors on audit quality. Similarly to previous studies, this thesis classifies audit firms as a big 4/5/6/8 or a non-big 4/5/6/8. A mid-tier firm, i.e. Grant Thornton and BDO Seidman, is also classified under a non-big firm because a mid-tier firm is Southeast Asia still has a small market share.

To contribute both quantitative and qualitative evidence from Southeast Asia to literature on earnings management and audit quality as previously mentioned contexts, the next chapter will outline the methodology of this thesis.

CHAPTER 6

METHODOLOGY

6.1 INTRODUCTION

Chapters 3, 4 and 5 identified gaps in the literature on earnings management and audit quality. These gaps lead to doubts as to what earnings management and audit quality are and how earnings management can be used as a measure of audit quality. If earnings management is used as a measure of audit quality, the lower the level of discretionary accruals the financial statements has, the higher the audit quality. This also implies that a high quality audit helps limit earnings management. This implication finally leads the author to question which factors influence audit quality.

To address these research questions, this chapter outlines the research design used in this thesis. This thesis uses a mixed methods research approach. Section 6.2 delineates the quantitative research design used for investigating the influence of audit firm type and investor protection on audit quality. A new measure of audit quality and probit models is developed to use for testing this thesis's propositions and hypotheses. This section also gives the detail of the sample selection and data collection. Section 6.3 outlines the research design used for exploring the perspectives on the association between earnings management and audit quality. Qualitative research is selected for this objective. The decisions on the selection of the approach used for collecting qualitative data are discussed. This section also shows how qualitative data is analysed and what the major limitations to the collection of this qualitative data are. Section 6.4 describes the research design used for identifying national level factors in promoting audit quality. It shows how the probit model is improved by the results of the qualitative evidence. Section 6.5 is the summary of this chapter.

6.2 PART I: HOW DO AUDIT FIRM TYPE AND INVESTOR PROTECTION INFLUENCE AUDIT QUALITY?

Firstly, the *analytical proposition 1* that challenges the general belief that big firms have higher audit quality than non-big firms is tested. In addition, the influence of investor protection, switching audit firm type and audit firm type tenure on audit quality is investigated. In doing so, a new measure of audit quality that is based on both the materiality concept and the audit report concept is developed.

6.2.1 MEASURE OF AUDIT QUALITY

This thesis's measure of audit quality is developed based on the assumption that earnings management leads to financial statements not being presented fairly; therefore, an auditor is required to propose an adjustment for earnings management and/or even modify his/her unqualified audit opinion, if necessary. However, if a level of earnings management is below the auditor's materiality level, the auditor can also issue an unqualified audit opinion without removing the impacts of earnings management on the financial statements. Thus, it is implied that, in the absence of other situations that affect auditor opinion, the audited financial statements with a clean audit report are expected to have a small level of discretionary accruals and the level of discretionary accruals should be below the auditor's materiality level.

In this thesis, audit quality ($AudQua$) is then defined by the joint association between a level of discretionary accruals and a type of audit opinion. The author assumes that there should be an audit accepted level of discretionary accruals ($AcceptedDA$). This level of discretionary accruals is a level of discretionary accruals that does not alter an auditor's opinion on the financial statements. In other words, $AcceptedDA$ is similar to the materiality level and is used as a benchmark to evaluate audit quality.

The materiality level is influenced by many factors, e.g. individual's judgement and firm's culture. Auditors who are more flexible may have a high materiality level and therefore may tolerate more discretionary accruals whilst those who are more conservative may have a low materiality level and therefore may tolerate less discretionary accruals. Therefore, to test the extent to which an audit firm can tolerate discretionary accruals, this thesis sets up

different $AcceptedDA$ levels which run from 0.5% through 1%, 2.5%, 5%, 7.5%, 10%, 15%, 20% to 30% of lagged total assets. The assumption of the test is that the lower the discretionary accruals that an auditor tolerates, the higher the audit quality.

From the above assumption, audit quality is seen when the level of discretionary accruals should be below the auditor's materiality level and the auditor issues an unqualified audit report. Discretionary accruals (DA_{it}) predicted in the next section, $AcceptedDA$ and type of audit opinion are then used to consider audit quality. To consider audit quality, the author compares the absolute value of discretionary accruals | DA_{it} | with $AcceptedDA$. If the difference between | DA_{it} | and $AcceptedDA$ is greater than 0, it is coded as $Over_{it}$. However, if difference between | DA_{it} | and $AcceptedDA$ is lesser than 0, it is coded as $Under_{it}$.

$AudQua_{it}$ is finally coded by the joint relationship between type of audit opinion and $Over_{it}/Under_{it}$. Similar to empirical studies (e.g. Chen, Chen and Su, 2001; Butler, Leone and Willenborg, 2004; Johl, Jubb and Houghton, 2007; and Wang, Wong and Xia, 2008) an audit opinion is classified as a clean opinion ($Clean_{it}$) or an unclean opinion ($UnClean_{it}$). $AudQua_{it}$ is equal to 0 if $Over_{it}$& $Clean_{it}$ or $Under_{it}$&$UnClean_{it}$; and 1 if $Under_{it}$& $Clean_{it}$ or $Over_{it}$&$UnClean_{it}$.

As previously mentioned, this thesis uses different levels of benchmark to test the extent to which an audit firm can be tolerant of earnings management. If the benchmark increases, the audit firm will also have a higher probability of being defined as a high quality audit provider. This is because we have a high accepted level of discretionary accruals. Therefore, having a high probability of being defined as a high quality audit at a high level of benchmark indicates that audit quality is impaired since an audit firm is more tolerant of earnings management without modification of its unqualified audit opinion. For example, if reported discretionary accruals are 14% of lagged total assets, an audit firm will not be defined as a high quality audit provider at benchmarks of 0.5%, 1%, 2.5%, 5%, 7.5% and 10%. However, if the benchmark increases to 15%, 20% and 30%, this audit firm will be defined as a high quality audit provider.

We use nine different accepted levels of discretionary accruals ($AcceptedDA$) which one level for each probit regression as we design the test procedure in Section 6.2.3. To

investigate how an audit firm is able to tolerate discretionary accruals at these different *AcceptedDA*s as we described above, we therefore have to observe a trend of a coefficient rather than interpret the results only from one *AcceptedDA*. If the coefficient of the tested variable is found to have statistical significance with a negative sign at small *AcceptedDA*s but with a positive sign at high *AcceptedDA*s, this indicates that this tested factor impairs audit quality. It reduces the audit firms' probability of being defined as a high audit quality provider at small accepted levels of discretionary accruals but increases this probability at high levels of discretionary accruals. This infers that this tested factor leads the audit firm to be more tolerant of high levels of discretionary accruals without modifying their unqualified opinions. On the other hand, if the coefficient of the tested variable is found to have statistical significance with a positive sign at small *AcceptedDA*s but with a negative sign at high *AcceptedDA*s, this indicates that this tested factor improves audit quality. It increases the audit firms' probability of being defined as a high audit quality provider at small accepted levels of discretionary accruals but decreases this probability at high levels of discretionary accruals. This infers that this tested factor leads the audit firm to be less tolerant of high levels of discretionary accruals.

6.2.2 THE ESTIMATION OF DISCRETIONARY ACCRUALS

This section makes a decision on the accruals model that is used to estimate discretionary accruals, which is a proxy for earnings management. Following empirical studies (e.g., Johnson, Khurana and Reynolds, 2002; Kim et al., 2003; Myers, Myers and Omer, 2003; Krishnan, 2003; Maijoor and Vanstraelen, 2006; Poit and Janin, 2007), this thesis uses discretionary accruals as a numerical measure of earnings management and audit quality. The estimation is performed by the cross-sectional version of the Jones (1991) Model which has been used in many earnings management studies (e.g., DeFond and Subramanyam, 1998; Becker et al., 1998; Krishnan, 2003; Myers et al., 2003; Piot and Janin, 2007). The coefficients of the cross-sectional version of the Jones (1991) Model are separately estimated for each two digit SIC code and for each year. The fitted value is non-discretionary accruals; on the other hand, the error term is discretionary accruals.

Even though the modified version of the Jones Model developed by Dechow et al. (1995) also captures well discretionary accruals (Dechow et al., 1995; Bartov et al., 2001) and is used in many studies (e.g., Johnson et al., 2002; Chung and Kallapur, 2003; Larcker and

Richardson, 2004; Reichelt and Wang, 2010), for this thesis's purpose, the Jones (1991) Model is preferable to its modified versions. This is because the modified version of Jones Model's assumption is that a management manipulates revenue recognitions of credit sale in the event period. Change in accounts receivable is then included in the original Jones Model only for the event period. However, the author presumes that earnings management occurs randomly; therefore, the event period is not defined.

Moreover, the multinational study of Haw et al. (2004), which tested the influence of legal institutions on earnings management in 22 countries, also used the cross-sectional version of the Jones (1991) Model. However, as commented on by Francis and Wang (2008), in the context of multinational study, the use of the previous year's abnormal accruals as a benchmark for estimating the current year's accruals outperforms the cross-sectional version of accruals model. They pointed out that using the cross-sectional version of accruals model is less effective if there are a small number of observations per country.

However, the author contends that Francis and Wang's (2008) estimation of discretionary accruals might be problematic if there were unusual circumstances in the previous year. Importantly, Francis and Wang's (2008) estimation of discretionary accruals is based only on firm level factors. For this thesis's purpose of providing evidence for international comparison, all companies in the same industry even in different countries are assumed to use similar accounting policies and practices under the same economic circumstances. This initial assumption is drawn from the fact that the author estimates discretionary accruals from a pool data set without being concerned with the influence of national level factors on discretionary accruals. Therefore, the author holds the assumption that controls the influence of accounting environments and economic circumstances on discretionary accruals. In addition, following Dechow et al.'s (1995) view that the influence of other factors on discretionary accruals has not been identified yet, the author initially omits the influence of accounting environments and economic circumstances on discretionary accruals from the computation of discretionary accruals. The influence of accounting environments and economic circumstances will be subsequently tested in Section 6.2.3. Hence, the estimation of discretionary accruals should be based on each industry rather than each individual company. This is to capture the influence of institutional factors on audit quality at a national level.

The cross-sectional version of the Jones (1991) Model to estimate discretionary accruals is:

$$\frac{TA_{ijt}}{A_{ijt-1}} = \frac{\alpha_{jt}}{A_{ijt-1}} + \beta_{1jt}\frac{\Delta REV_{ijt}}{A_{ijt-1}} + \beta_{2jt}\frac{PPE_{ijt}}{A_{ijt-1}} + e_{ijt} , \tag{22}$$

where:

TA_{ijt}	=	total accruals for firm i in industry j in year t which is defined as the difference between net income and operating cash flows;
ΔREV_{ijt}	=	revenues in year t less revenues in year $t-1$ for firm i in industry j;
PPE_{ijt}	=	gross property, plant and equipment for firm i in industry j in year t;
A_{ijt-1}	=	total assets for firm i in industry j in year $t-1$;
e_{ijt}	=	error term for firm i in industry j in year t which consists of u_i and ε_{it}, u_i is firm i's time-invariant component and ε_{it} is firm i's remainder component in year t ;
β_{1jt},β_{2jt}	=	estimators for industry j in year t;
α_{jt}	=	intercept for industry j in year t;
i	=	1,…,I firm index;
t	=	1,…,T_t,year index for which ranges from 1 to 19 years; and
j	=	1,…,J industry index (two-digit SIC code level).

The prediction of discretionary accruals is:

$$\hat{e}_{ijt} = \frac{TA_{ijt}}{A_{ijt-1}} - \left(\frac{\hat{\alpha}_{jt}}{A_{ijt-1}} + \hat{\beta}_{1jt}\frac{\Delta REV_{ijt}}{A_{ijt-1}} + \hat{\beta}_{2jt}\frac{PPE_{ijt}}{A_{ijt-1}}\right). \tag{23}$$

6.2.3 TEST PROCEDURES

This thesis uses a probit model to test *analytical proposition 1* and **Hypothesis$_0$ 1-4**. *Analytical proposition 1* observes the influence of audit firm type and investor protection on audit quality. Its hypotheses are as follows.

Hypothesis$_0$ 1: A big audit firm, which is perceived to be a higher rank of audit firm, would have a higher audit quality than a non-big firm.

Hypothesis$_0$ 2: Audit firms from a country which has a higher rank of investor protection would have a higher audit quality than those from a country which has a lower rank of investor protection.

Hypothesis$_0$ 3: If there is no difference in audit quality within the same type of audit firm, audit firm type tenure will not affect audit quality.

Hypothesis₀ 4*:* If there is the difference in audit quality between types of audit big /non-big firm and a big firm is of higher audit quality than a non-big firm, change in audit firm type will impact audit quality. The change from a non-big firm to a big firm will improve audit quality; on the other hand, the change from a big firm to a non-big firm will decrease audit quality.

The probit model and logit model have become popular in auditing research as in other empirical areas. For example, Kim et al. (2003) developed a probit model which predicted the probability that the client would select a big firm. Carey and Simnett (2006) and Reichelt and Wong (2010) used a logit model to predict the probability that an auditor would issue a going-concern report. Butler et al. (2004) also used a logit regression to predict the probability that an auditor would draw a clean or unclean opinion. This thesis uses the probit model to estimate the probability that an audit firm would issue an unmodified opinion to a client who reports discretionary accruals below this thesis's artificial materiality level. The probit model is:

$$\Pr(AudQua)_{it} = \alpha + \beta_1 AudRank_{it} + \beta_2 Tenure_{it} + \beta_3 ChangeAud_{it} + \beta_4 ROA_{it} + \beta_5 DtoE_{it} + \beta_6 natTA_{it} + \beta_{7-10} InvRank_p + v_{it}, \tag{24}$$

where:

$AudQua_{it}$	=	audit quality for firm i in year t; (see definition in Section 6.2.1)
$AudRank_{it}$	=	the rank of audit firm type for firm i in year t which is equal to 1 if the audit firm type is a big firm and 2 if the audit firm type is a non-big firm;
$ChangeAud_{it}$	=	a dummy variable which is equal to 1 if firm i switches audit firm type in year t, 0 otherwise;
$Tenure_{it}$	=	the number of consecutive years for which audit firms within the same type were employed as the listed company's auditor for firm i at year t;
ROA_{it}	=	return on assets for firm i in year t which is the Compustat item ROA or is computed as $[net\ income_{it}\ (IB)/total\ assets_{it}(AT)]\ x100$;
$DtoE_{it}$	=	debt to equity ratio which is computed as $[long-term\ deb_{it}(DLTT) + current\ portion\ of\ long-term\ debt_{it}(DD1)] / total\ stockholders'equity_{it}\ (SEQ)$;
$natTA_{it}$	=	natural logarithm of total assets (USD) for firm i in year t;
$InvRank_p$	=	the rank of the World Bank Organisation's level investor protection for country p;
v_{it}	=	unspecific random effects for firm i in year t;
i	=	1,…,I firm index;
p	=	Indonesia, Malaysia, the Philippines, Thailand or Singapore; and
t	=	1,…,T_I, year index which allows unbalanced panel data.

The panel probit model is run by assuming a normal distribution, $(0, \sigma_V^2)$, for the random effects v_i

$$\Pr(y_{i1}, \dots, y_{in_i} | x_{i1}, \dots, x_{in_i}) = \int_{-\infty}^{\infty} \frac{e^{-v_i^2/2\sigma_v^2}}{\sqrt{2\pi\sigma_v}} \left\{ \prod_{t=1}^{n_i} F(y_{it}, x_{it}\beta + v_i) \right\} dv_i \qquad (25)$$

where

$$F(y, z) = \begin{cases} \emptyset(z) \, if \, y \neq 0 \\ 1 - \emptyset(z) \, otherwise \end{cases}$$

where $\emptyset$ is the cumulative normal distribution. Coefficients of probit model are Z-score (StataCorp LP, 2013). In order to compute predicted probability, we then need to transform these coefficients. We also relax the Central Limit Theorem that with our large sample size, our data is assumed to have a normal distribution.

This thesis uses the current rank of investor protection published by the project under the World Bank organisation. The rank of investor protection is considered by the regulations related to the information disclosure, the director liability, and the shareholder lawsuit. As of August 2012, Singapore had the highest investor protection, followed, in order, by Malaysia, Thailand, Indonesia and the Philippines (Doing Business, 2012). The thesis also assumes that there is insignificant change in it over 1993-2011.

Table 6 below shows the expected sign of each coefficient and its trend when the benchmark increases.

Table 6: Expected Sign of Variables

Variable	Expected Sign	Proposition	Impacts when the benchmark increases
AudRank	Negative	A non big firm (rank 2) is perceived to have lower audit quality than a big firm (rank 1).	In comparison to a big firm, a non big firm has a higher probability of being a high quality audit firm at a high benchmark. Hence its coefficients increase.
ChangeAud	Negative or Possitive	If there is a difference in audit quality between a big firm and a non big firm, a change in audit firm type either from a non big firm to a big firm or from a big firm to a non big firm increases or decreases audit quality.	Its coefficients decrease if a change in audit firm type helps promote audit quality.
Tenure	Nil	If there is no difference in audit quality within the same type of audit firm, audit firm type tenure will not impact audit quality.	Its coefficients are insignificant at all benchmarks.
ROA	n/a	Empirical studies provide mixed findings.	n/a
DtoE	n/a	Empirical studies provide mixed findings.	n/a
natTA	n/a	Empirical studies provide mixed findings.	n/a
InvRank	Negative	A lower rank of investment protection country is perceived to have lower audit quality than a higher rank of investment protection country. Therefore, in comparison to Singapore (rank 1), Malaysia (rank 2), Thailand (rank 3), Indonesia (rank 4) and the Philippines (rank 5) are perceived to have lower audit quality.	A lower rank of investment protection country has a high probability of being a high quality audit provider at a high benchmark. Its coefficients will increase in line with the increase in the benchmark.

To check the strength of the results of equation (24), a robustness test is also performed. It classifies the selected countries into two groups based on the study of Leuz et al. (2003). Singapore and Malaysia have a high level of investor protection whilst Thailand, Indonesia and the Philippines are defined as low-level investor protection countries. This test observes the joint effect of the level of investor protection and the audit firm type on audit quality. In doing so, $DummyAud$ is used instead of $AudRank$ and $LeuzInv$ replaces$InvRank$. This is because these ordinal variables are problematic in producing the joint-effect variables. The robustness test model is:

$$\Pr(AudQua)_{it} = \alpha + \beta_1 DummyAud_{it} + \beta_2 LeuzInv_p + \beta_3 ChangeAud_{it} + \beta_4 DummyAud_{it} * LeuzInv_p + \beta_5 DummyAud_{it} * ChangeAud_{it} + \beta_6 DummyAud_{it} * ChangeAud_{it} * LeuzInv_p + \beta_7 Tenure_{it} + \beta_8 DummyAud_{it} * Tenure_{it} + \beta_9 ROA_{it} + \beta_{10} DtoE_{it} + \beta_{11} natTA_{it} + v_{it},$$
(26)

where:

$AudQua_{it}$	=	audit quality for firm i in year t;
$DummyAud_{it}$	=	a dummy variable that is equal to 1 if firm i was audited by a big firm in year t and 0 otherwise;
$LeuzInv_p$	=	Leuz et al.'s (2003) level of investor protection for country p;
$Tenure_{it}$	=	the number of consecutive years for which audit firms within the same type were employed as the listed company's auditor for firm i at year t;
$ChangeAud_{it}$	=	a dummy variable which is equal to 1 if firm i in year t switches audit firm type, 0 otherwise;
ROA_{it}	=	return on assets for firm i in year t which is the Compustat item ROA or is computed as $[net\ income_{it}\ (IB)/total\ assets\ _{it}(AT)]\ x100$;
$DtoE_{it}$	=	debt to equity ratio which is computed as $[long - term\ deb\ _{it}(DLTT) + current\ portion\ of\ long - term\ debt\ _{it}(DD1)]\ /total\ stockholders'\ equity_{it}\ (SEQ)$;
$natTA_{it}$	=	natural logarithm of total assets (USD) for firm i in year t;
v_{it}	=	unspecific random effects for firm i in year t;
i	=	1,…,I firm index;
p	=	Indonesia, Malaysia, the Philippines, Thailand or Singapore; and
t	=	1,…,T_i, year index.

This robustness test provides further investigations as follows. $DummyAud * LeuzInv$ is used to test whether a big firm from countries with a high level of investor protection outperforms other firms, especially a big firm from countries with a low level of investor protection. $DummyAud * ChangeAud$ and $DummyAud * ChangeAud * LeuzInv$ are used to observe the influence of a pattern of switching audit firm on audit quality. It is believed that switching from a non-big firm to a big firm should help promote audit quality. Importantly, switching from a non-big firm to a big firm in countries with high level of investor protection should be more effective in improving audit quality. $DummyAud *$

Tenure is to observe whether long audit firm type tenure with a big firm helps promote audit quality.

The next section will show how the sample is selected and how data are collected.

6.2.4 SAMPLE SELECTION AND DATA COLLECTION

The initial sample is from the Compustat database. As presented in Table 7 on the next page, the list includes 2,199 non-financial firms (25,889 firm-year observations) incorporated in Indonesia, Malaysia, the Philippines, Singapore or Thailand.

Table 7: Summary of Sample Selection

	Indonesia	Malaysia	Philippines	Singapore	Thailand	Total
Total number of listed companies in Compustat	364	946	214	663	532	2,719
Delete:						
Listed companies in financial industry (SIC Code 6XXX)	-93	-135	-74	-86	-119	-507
Missing data	0	-13	0	0	0	-13
Firms	**271**	**798**	**140**	**577**	**413**	**2,199**
Firm-year observations	**3,087**	**9,741**	**1,785**	**6,243**	**5,021**	**25,877**
Delete:						
Incomplete data and extreme value of total accruals [a]	-510	-1,899	-333	-1,002	-359	-4,103
Insufficient data [b]	-231	-152	-201	-209	-224	-1,017
Final sample **Firms**	**260**	**791**	**124**	**567**	**406**	**2,148**
Firm-year observations	**2,346**	**7,690**	**1,251**	**5,032**	**4,438**	**20,757**

Notes:

[a] Incomplete data refers to missing data in Compustat and includes extreme values of total accruals. Extreme value of total accruals is observations with absolute values of (total accruals divided by lagged total assets) which are greater than five. They are considered as outliers and excluded. Empirical studies used different criteria for defining outliers, for example, the top and bottom 1 % of the distribution of all variables (Johnson et al., 2002) the top or bottom 0.5 % of the distribution of operating cash flows (Myers et al., 2003), the absolute value of total accruals scaled by lagged total assets being greater than 1 (Kothari et al., 2005), and the top and bottom 1 % of unexpected accruals (Maijoor and Vanstraelen, 2006). How to define outliers depends on the study's data and objectives and the accruals outliers observed. By scanning for outliers, a change in audit type is sometimes followed by an extreme value of accruals.

[b] Insufficient data refers to observations that do not have sufficient data for computation of discretionary accruals and observations that create gaps in the data.

Companies in the financial industry are excluded from in this study. Being strictly controlled by regulations and governments causes these companies to have a different environment for engaging in earnings management from other industries. In addition, as noted by Becker et al. (1998) and DeFond and Subramanyam (1998), the computation of discretionary accruals for financial companies is still problematic.

Related data is also exported from the Compustat database. The initial sample data covers the period from 1992 to 2011. Data on Indonesia, Malaysia, the Philippines, Singapore and Thailand exist from 1992 onwards except for the item of cash flow from operations that has been available since 1994. The longest contiguous time-series for each firm is included in the analyses. Missing data results in this study dropping some firm-year observations. The final sample is 2,148 firms (20,757 firm-year observations).

6.3 PART II: QUALITATIVE EVIDENCE ON EARNINGS MANAGEMENT AND AUDIT QUALITY

Previous studies provide a great deal of quantitative evidence for the literature on earnings management and audit quality. However, qualitative studies are still limited. This thesis will not only add new quantitative evidence but also contribute qualitative evidence from Southeast Asia to the literature on earnings management and audit quality. The qualitative research design of this thesis is as follows.

6.3.1 DATA COLLECTION

One major aim of this thesis is to gain more understanding about earnings management and audit quality from the perspectives of all the stakeholders in an audit. To derive this qualitative evidence, this thesis will conduct naturalist-constructionist research. According to Rubin and Rubin (2012), naturalist research focuses on all meaning derived from people's previous experience and biases. Since naturalist research is the study of people's previous experience and biases, it is also called constructionist research. Constructionist research focuses on how people interpret the external world from their understanding that they build or construct.

Rubin and Rubin (2012) list four techniques for collecting naturalistic data which are generally used in qualitative research. These techniques are participant observation, documentary analysis, conversional and narrative analysis and in-depth qualitative interviews. For this topical study, in-depth qualitative interviews are selected. Kvale and Brinkmann (2008) emphasise that "…If you want to know how people understand their world and their lives, why not talk with them…". They also show that a conceptual interview helps an interviewer explore the meaning and concept of what is questioned, including an interviewee's standpoint and how the interviewee's perspective is associated with the concept which is being studied. Rubin and Rubin (2012) underscore that in-depth interviews can help researchers derive in-depth information, not just yes-or-no, agree-or-disagree answers. The interview questions are open ended; therefore, they give an opportunity for interviewees to create a variety of responses to the questions. Moreover, the set of interview questions is also flexible so that questions can be changed, re-organised and even added.

Rubin and Rubin (2012) identify four major types of interview which include focus groups, online Internet interviews, casual conversation and in-passing clarification, and semi-structured and unstructured interviews. Focus group interviews seem to be difficult to implement for this thesis's purpose. This thesis is a multinational study; therefore, the time consumed and budget for arranging focus group interviews might be a major limitation. Importantly, we may be unable to get busy businessmen to attend the focus group interviews either. As pointed out by Rubin and Rubin (2012), an interview through a casual conversation and in-passing clarification is suitable for the case that an interviewee and an interviewer are familiar and have talked with each other before. Therefore, this interview approach is inappropriate for this thesis. For the purposes of this thesis we choose semi-structured interviews.

6.3.2 INTERVIEW PROCESS

The justification of countries that were selected to conduct the interviews is based on the results of the tests in Section 6.2 that investigated the influence of investor protection on audit quality. According to the results of the cluster of countries in the first analysis, Malaysia, Singapore and Thailand were chosen. Singapore is perceived to have the strongest investor protection and highest audit quality in this region. Therefore, Singapore

was selected as the base county. Even though Malaysia is also perceived to have strong investor protection, audit firms in Malaysia were found to be more tolerant of discretionary accruals than those in Singapore. This may imply that there might be other institutional factors that influence audit quality. Malaysia was thus selected. Thailand was chosen as the representative of the remaining countries that have low investor protection and were found to be more conservative.

From each country, interviewees from professional institutes, stock exchanges, academic institutes, listed companies, revenue departments, big 4 and non-big 4 audit firms, regulators and standard setters, and audited companies who are primarily responsible for promoting audit quality were chosen. The perspectives of the different stakeholders chosen on the issues of audit quality and earnings management are explored in the interviews. The interviews with respondents from professional and securities regulators help explore how they control and monitor audit firms' and auditors' audit quality and what actions against earnings management they expect auditors to take. The interviews with the respondents from a big firm and a non-big firm help us gain more understanding of how audit quality is promoted in different types of audit firms and how they deal with earnings management.

The interviews with respondents from the audited companies help derive their points of view on earnings management and audit quality, as they are users of the audit service. The interviews cover both those companies that select a big firm as their auditors and those that choose a non-big firm. These help us explore why these two types of audit firm are perceived to be significantly different. The interviews also include respondents from revenue departments and academic institutes, which also have a strong influence on the accounting environment at a national level.

One person from each organisation who was associated with the audit process was selected and initially invited to participate in the interviews. The same big 4 auditors were chosen for all countries. This is because of the general assumption that big 4 auditors are homogenous in terms of audit quality. Non-big 4 auditors were selected from the list on securities committee's websites, except for Singapore where the auditors were randomly selected from audit reports published on the stock exchange's website. This is because for Singapore the list of registrant audit firms is not available online. To gain perspectives on audit quality and earnings management from lecturers who are expert in auditing and

accounting, a lecturer from an accounting school or a business school of the top university in each country was chosen. Listed companies that employed a big 4 audit firm and a non-big 4 audit firm as their auditors were also randomly selected from the list on the stock exchanges' websites.

The name, position and email address of the interviewees were obtained from their organisations' websites. Cover letters and information sheets were distributed to potential participants through emails. Once the participants agreed to the requests for the interview, dates and times of the interviews were arranged. If the requests were rejected, persons from other organisations which were in the same categories were invited.

The interviews were approved by the University of York's research ethics committee. The form is in Appendix 1. Most of the interviews were conducted at the interviewees' workplaces. Before doing the interviews, all participants were informed about the purposes of the study and asked to sign the informed consent forms. The interviews were recorded by voice recorder if consent was given by interviewee. If not, notes were taken. All interviews except in Thailand were conducted in English. For the Thai interviews transcriptions were translated from Thai into English by the author/interviewer. For the Singaporean and Malaysian interviews transcriptions were rechecked for correctness by the author/interviewer's Malaysian colleague. This helped mitigate against errors in the transcriptions that might arise from Singaporean interviewees' and Malaysian interviewees' English accent.

16 interviews were conducted as shown in table 8 below.

Table 8: List of Interviewees

	Thailand	Malaysia	Singapore	Total
Professional regulator	1	1	1	3
Securities regulator	1	0	0	1
Big 4	0	1	1	2
Non-big 4*	2	3	0	5
Academic institute	0	0	1	1
Revenue department**	0	0	0	0
Listed company***	2	1	0	3
Non-listed company****	1	0	0	1
Total	7	6	3	16

Notes: * One mid-tier audit firm and one local audit firm from Thailand and three mid-tier audit firms from Malaysia agreed to be interviewed.

** There was no response to the requests for the interviews from the revenue departments in all countries. I then sent the requests to the office of auditor general. However there was also no response to the requests. Since these two organisations are governmental bodies, the process of getting the approval for the interview might be difficult and take time.

*** I conducted interviews with one listed company, which employed a local audit firm as its auditor, and one listed company from Thailand and one listed company from Malaysia which employed big audit firms as their auditors.

**** Under the Acts, state-owned organisations in Thailand have to be audited by the office of auditor general. Therefore state-owned organisations that also trade on the stock exchange have to appoint the office of auditor general to be their auditors. There was no response to the request for the interview from the listed state-owned organisation. There was one non-listed state-owned organisation that agreed to the request. This organisation has two subsidiary companies that have traded on the stock exchange.

6.3.3 INTERVIEW QUESTIONS AND ANALYSIS OF THE INTERVIEWS

The interview questions focused mainly on the respondents' perspectives on earnings management and audit quality. The interview questionnaire is given in Appendix 1. All interviews began with questions of how the interviewees define and measure audit quality. The interviewees were then asked to identify factors at a firm level and a national level that lead to good audit quality. Next the interviewer asked all interviewees questions about their views on the general belief that a big firm is of higher quality than a non-big firm.

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In addition, to extend the results of the tests in Section 6.2, all interviewees were asked to give their opinions on the impact of long audit tenure on audit quality and the policy on audit firm rotation. At the end, all interviewees were questioned as to whether they knew the term *earnings management*. If so, they were questioned how they define this term and how it differs from fraud and material misstatement. Follow-up questions on whether auditors are responsible for detecting earnings management were posed to the interviewees from the regulatory bodies and the academic institution. Follow-up questions on how audit firms developed audit methodologies for detecting earnings management were posed to the interviewees from the audit firms.

The analysis of the interviews is done by each core research question. Key and/or interesting points of view were identified and discussed. This helped this thesis explore the association between earnings management and audit quality, and especially helped the author identify national, firm, engagement and level factors that affect audit quality.

6.3.4 LIMITATIONS

There were some limitations of the interviews. As raised by Rubin and Rubin (2012), naturalist-constructionist research is associated with people's experience and biases; therefore, biases and expectations may influence the interviewees' perspectives. Differences in culture and language between the interviewees and the interviewer might lead to problems during the interviews. For example, it might lead to the interviewees misunderstanding research questions or the interviewer misunderstanding the interviewees' answers. This might finally undermine the interview quality. To address this issue, as mentioned earlier, the Singaporean and Malaysian interviews transcriptions were rechecked for correctness by the author/interviewer's Malaysian colleague. In addition, the author/interviewer was unable to interview all interviewees within the same category from different countries. Therefore, it is difficult to compare the views within each category of interviewees. Importantly, it may lead the qualitative findings to suffer from a lack of consistency due to incorrect direct comparisons. This is, for example, the comparison between a big firm and a non-big firm that are just from the interviewees from big firms in Singapore and Malaysia and the interviewees from non-big firms in Malaysia and Singapore.

6.4 PART III: WHAT INFLUENCES AUDIT QUALITY?

The section outlines the research design used for testing *analytical proposition 2* and *Hypothesis$_0$ 5-9*. This test focuses mainly on key accounting environments for good audit quality that were identified by the interviewees in Section 6.3. From the results of the interviews in Section 6.3, hypotheses of this test are developed as follows.

Hypothesis$_0$ 5: Audit firms from a country where the language of the accounting standards is English would have a higher audit quality than those from a country where the language of the accounting standards is not English.

Hypothesis$_0$ 6: An audit firm would have a higher audit quality after an independent audit regulator, who performs the audit firm inspection, exists. The independent audit regulator is defined as the regulator who is member of the International Forum of Independent Audit Regulators (IFIAR).

Hypothesis$_0$ 7: Audit firms from a country with a low proportion of listed companies to registrant audit firms would have a higher audit quality than those from a country with a high proportion of listed companies to registrant audit firms.

Hypothesis$_0$ 8: An audit firm would have a higher audit quality after an accounting Act, which legislatively imposed the accounting standards, is effective.

Hypothesis$_0$ 9: An audit firm would have a higher audit quality after ISQC1 was adopted.

To test these five hypotheses in response to the results of the interviews, five institutional factors are introduced into the original probit model. These five institutional factors are the language of the accounting standards ($EngLsh$), the establishment of an independent audit regulator ($InspecAF$), a proportion of listed companies to registrant audit firms($ListCom\ to\ AuFirm$), whether an accounting Act ($AccAct$) is in force, and whether ISQC1 ($ISQC\ 1$) is in force. For$ListCom\ to\ AuFirm$, we use a dummy variable instead of a precise proportion of listed companies to registrant audit firms because we need to cluster our selected countries into two groups: high or low average proportion of listed companies to registrant audit firms.

The model is as follow:

$$\Pr(AudQua)_{it} = \alpha + \beta_1 AudRank_{it} + \beta_2 Tenure_{it} + \beta_3 ChangeAud_{it} + \beta_4 ROA_{it} +$$
$$\beta_5 DtoE_{it} + \beta_6 natTA_{it} + \beta_7 EngLsh_p + \beta_8 InspecAF_{pt} + \beta_9 List\ to\ AuFirm_p +$$
$$\beta_{10} AccAct_{pt} + \beta_{11} ISQC1_{pt} + v_{it}, \tag{27}$$

where:

(other variables are as defined in Section 6.2.3)

$EngLsh_p$	=	a dummy variable that is equal to 1 if the language of country p's accounting standards is English and 0 otherwise;
$InspecAF_{pt}$	=	a dummy variable that is equal to 1 if country p's independent regulator who takes responsibility to conduct audit firm inspections exists in year t and 0 otherwise;
$List\ to\ AuFirm_p$	=	a dummy variable that is equal to 1 if the average of country p's proportion of listed companies to registrant audit firms is less than 5:1 and 0 otherwise: the proportion is computed as $\dfrac{number\ of\ listed\ companies_p}{number\ of\ registrant\ audit\ firms_p}$;
$AccAct_{pt}$	=	a dummy variable that is equal to 1 if country p's accounting Act is effective in year t and 0 otherwise; and
$ISQC1_{pt}$	=	a dummy variable that is equal to 1 if country p's ISQC1 is effective in year t and 0 otherwise.

The expected signs of these five institutional variables and the impact on their coefficients when the benchmark increases are shown in Table 9 on the next page.

Table 9: Expected Sign of Institutional Variables

Variable	Expected Sign	Proposition	Impacts when the benchmark increases
EngLsh	Positive	A country where the language of accounting standards is English has a higher audit quality than a country where the language of accounting standards is not English.	A country where the language of accounting standards is English has a high probability of being a high quality audit provider at a low level of benchmark. Its coefficients will decrease when the benchmark increases.
InspecAF	Positive	If an independent regulator's inspection of audit firms can promote audit quality, an audit firm in the periods when the regulator exists has a higher audit quality than in other periods.	At a low level of benchmark, an audit firm in the periods that the independent regulator exists has a higher probability of being a high quality audit firm than in other periods. Its coefficients will decrease when the benchmark increases.
List to AuFirm	Positive	A country with a low proportion of listed companies to registrant audit firms has a higher audit quality than a country with a high proportion of listed companies to registrant audit firms	A country with low proportion of listed companies to registrant audit firms has a high probability of being a high quality audit provider at a low level of benchmark. Its coefficients will decrease when the benchmark increases.
AccAct	Positive	If an accounting Act is a key driver to promote audit quality at a national level, an audit firm in the periods when the accounting Act is effective has a higher audit quality than in other periods.	At a low level of benchmark, an audit firm has a higher probability of being a high quality audit firm in the periods when an accounting Act exists than in other periods. Its coefficients will decrease when the benchmark increases.
ISQC 1	Positive	An audit firm has a higher audit quality in the periods when ISQC 1 is effective than in other periods.	At a low level of benchmark, an audit firm has a higher probability of being a high quality audit firm in the periods when ISQC 1 is effective than other periods. Its coefficients will decrease when the benchmark increases.

A robustness test is also performed in part III. It introduces other institutional variables into the original probit model. Similarly to the robustness test in Section 6.2.3, $AudRank$ is replaced by a binary variable $DummyAud$. Moreover, $LegalSystem$, $IslamicAcc$, CPI, $CGrules\&practices$, $Enforcement$, $Political\&Regulatory$, $IGAAP$ and $CGculture$ are introduced into the probit model.

Hung (2001) pointed out that a common law system (as in e.g. the US and the UK) is suitable for a contract among a large group of people and parties. The companies then depend on public shareholders and creditors. On the other hand, a legal code system (as in e.g. France and Germany) is appropriate for a contract between a small numbers of parties. The companies depend on managers, banks, employees and government. Therefore, Hung (2001) presumed that countries with a common law system are likely to have stronger investor protection than those with a legal code system. Haw, Hu, Hwang and Wu (2004) used the same presumption as Hung (2001) in their study. Following Hung (2001) and Haw et al. (2004), $LegalSystem$ is used to examine how different types of legal systems impact audit quality.

Saudanaran (2005) reported that Islamic accounting practices play an important role in Malaysia and Indonesia. This raises doubt as to whether Islamic accounting practices also impact audit quality. $IslamicAcc$ is used to test this.

According to Saudanaran (2005) and the ACGA, corruption is a big issue in all countries except for Singapore. This raises the question as to whether corruption impacts earnings management and audit quality. Following Wysocki (2004), CPI is also added into this probit model. CPI is a country's corruption perception index assessed by Transparency International. The index ranges from zero to 100. A higher index indicates that a country has lower level of corruption. The rank of corruption perception index 2012 from the lowest level to the highest level is Singapore (score: 86/100, rank: 5/177), Malaysia (50/100, 53/177), the Philippines (36/100, 94/177), Thailand (35/100, 102/177) and Indonesia (32/100, 114/177). CPI provided by the Transparency International is a percentage term. We change it into a decimal system. For example, if CPI is 36%, it is changed into 0.36.

A robustness test is also concerned with the influence of corporate governance on earnings management and audit quality. It is believed that a good environment for corporate governance can lead to a low level of earnings management and a high level of audit quality. To investigate the influence of corporate governance on audit quality, the scores of $CGrules\&practice$, $Enforcement$, $Polical\&Regulatory$, $IGAAP$ and $CGculture$ from the assessment of each country's corporate governance conducted by the Asian Corporate Governance Association (ACGA) are introduced into the probit model.

$CGrules\&practices$ indicates each country's quality of regulations regarding corporate governance in terms of documentation and in practice. $Enforcement$ measures the effectiveness of each country's public enforcement by the regulator and private enforcement by the investors. $Polical\&Regulatory$ focuses on each country's policy on corporate governance, the structure of the legal system, progress on the enactment of new reforms, quality of the judiciary and media freedom. $IGAAP$ indicates the effectiveness of each country's accounting and auditing environment. $CGculture$ represents all stakeholders' efforts to improve corporate governance.

The ACGA's assessment of corporate governance did not take place every year. Since 2007, the ACGA has reported the results of 2007, 2010 and 2012. We can access to these reports, but not those before 2007. Therefore, we use the scores of 2007 for 2000-2007. 2008 and 2009 use the scores of 2010. 2011 uses the scores of 2012. Similarly to CPI, the ACGA's score is a percentage term and is transformed into a decimal system.

The robustness model is as follows:

$$\Pr(AudQua)_{it} = \alpha + \beta_1 DummyAud_{it} + \beta_2 ChangeAud_{it} + \beta_3 Tenure_{it} + \beta_4 ROA_{it} + \beta_5 DtoE_{it} + \beta_6 natTA_{it} + \beta_7 EngLsh_p + \beta_8 InspecAF_{pt} + \beta_9 List\ to\ AuFirm_p + \beta_{10} AccAct_{pt} + \beta_{11} ISQC1_{pt} + \beta_{12} LegalSystem_p + \beta_{13} IslamicAcc_p + \beta_{14} CPI_{pt} + \beta_{15} CGrules\&practices_{pt} + \beta_{16} Enforcement_{pt} + \beta_{17} Political\&Regulatory_{pt} + \beta_{18} IGAAP_{pt} + \beta_{19} CGculture_{pt} + v_{it};$$ (28)

where:

$DummyAud_{it}$	=	a dummy variable that is equal to 1 if firm i was audited by a big firm in year t and 0 otherwise;
$EngLsh_p$	=	a dummy variable that is equal to 1 if the language of country p's accounting standards is English and 0 otherwise;

$InspecAF_{pt}$	=	a dummy variable that is equal to 1 if country p's independent regulator who takes responsibility to conduct audit firm inspections exists in year t and 0 otherwise;
$List\ to\ AuFirm_p$	=	a dummy variable that is equal to 1 if the average of country p's proportion of listed companies to registrant audit firms is less than 5:1 and 0 otherwise: the proportion is computed as $\frac{number\ of\ listed\ companies_p}{number\ of\ registrant\ audit\ firms_p}$;
$AccAct_{pt}$	=	a dummy variable that is equal to 1 if country p's accounting Act is effective in year t and 0 otherwise
$ISQC1_{pt}$	=	a dummy variable that is equal to 1 if country p's ISQC1 is effective in year t and 0 otherwise;
$LegalSystem_p$	=	a dummy variable that is equal to 1 if country p's legal system is common law tradition and 0 otherwise (Haw et al., 2004);
$IslamicAcc_p$	=	a dummy variable that is equal to 1 if country p's accounting standards and practices are influenced by Islamic accounting practices and 0 otherwise;
CPI_{pt}	=	country p's corruption perception index in year t as assessed by the Transparency International (Wysocki, (2004);
$CGrules\&practices_{pt}$	=	country's score for CG rules and practices in year t as evaluated by the ACGA;
$Enforcement_{pt}$	=	country's score for enforcement in year t as evaluated by the ACGA;
$Political\&Regulatory_{pt}$	=	country's score for its political and regulatory environment in year t as evaluated by the ACGA;
$IGAAP_{pt}$	=	country's score for IGAAP in year t as evaluated by the ACGA;
$CGculture_{pt}$	=	country's score for CG culture in year t as evaluated by the ACGA;
v_{it}	=	unspecific random effects for firm i in year t;
i	=	1,…,I firm index;
p	=	Indonesia, Malaysia, the Philippines, Thailand or Singapore; and
t	=	1,…,T_i, year index.

This analysis uses the same data set as used in the first analysis. To observe changes in institutional factors that might impact on audit quality, only firm-year observations that are from the period 2000 to 2011 are selected. The final sample is 17,758 firm-year observations.

6.5 SUMMARY

This thesis's purpose is to add both quantitative and qualitative evidence from Southeast Asia to the literature on earnings management and audit quality. In doing so, a mixed methods research approach is used. A new measure of audit quality and a new probit model are developed in order to identify factors that influence audit quality. Audit quality

is measured by the joint association between a level of earnings management and a type of audit opinion. The cross-sectional version of the Jones (1991) Model is selected to estimate discretionary accruals which is a proxy for earnings management. The probit model is used to test the degree to which an audit firm would be tolerant of earnings management without modification of its unqualified opinion. In doing so, artificial materiality levels are set up which run from 0.5% through 1%, 2.5%, 5%, 7.5%, 10%, 15%, 20% to 30% of lagged total assets. The test's assumption is that the more the audit firm can tolerate its client's discretionary accruals, the less the quality of the audit it performs.

The research approach of this thesis proceeded as follows. First, the probit model was used to investigate the influence of audit firm type and investor protection on audit quality. The investigation covered time-series data from 1992 to 2011 for 2,148 listed companies in Indonesia, Malaysia, the Philippines, Singapore and Thailand with a total of 20,757 firm-year observations. The data was sourced from the Compustat database. The results of this investigation will be reported in Chapter 7.

Secondly, 16 semi-structured interviews with respondents from the audit firms, the listed companies, the regulators and the academic institute in Malaysia, Thailand and Singapore were conducted. The justification of countries that were selected to conduct the interviews is based on the results of investigating the influence of investor protection on audit quality. The interviews aim to derive perspectives on earnings management and audit quality from the stakeholders of the audits, especially to identify factors that are perceived to be important in promoting audit quality at a national level. The results of the interviews will be presented in Chapter 8.

Thirdly, the probit model was improved in response to the interviews. National level factors in promoting audit quality identified by the interviewees and other national level factors that were suspected of influencing audit quality are introduced into the original probit model. To test whether these factors influence audit quality at a national level, only firm-year observations from the period 2000 to 2011 (total 17,758) were selected. The results of the test will be provided in Chapter 9.

CHAPTER 7

HOW DO AUDIT FIRM TYPE AND INVESTOR PROTECTION INFLUENCE AUDIT QUALITY?

7.1 INTRODUCTION

This chapter primarily tests whether a big firm is of higher audit quality than a non-big firm and how a country's investor protection system influences audit quality. A new measure of audit quality and a new probit model are developed for this test as identified in the methodology section. Discretionary accruals are used as a proxy for earnings management. The auditor's actions on these discretionary accruals depend on their effect on the financial statements. If the effect of earnings management as measured by discretionary accruals is greater than audit materiality, then the auditor either adjusts for this impact or modifies his/her opinion on the financial statements. If not, the auditor is able to issue an unqualified audit opinion even when the effect of these discretionary accruals on the financial statements is not removed.

The assumption of the test of this chapter is that there should be an accepted level of discretionary accruals that does not alter an auditor's opinion. This accepted level of discretionary accruals is used as an artificial audit materiality level or a benchmark for measuring audit quality. The benchmark is set at different levels from 0.5% through 1%, 2.5%, 5%, 7.5%, 10%, 15%, 20% to 30% of lagged total assets and is used to test how the different types of audit firms and a country's investor protection system, impact an audit firm's tolerance for its audited company's earnings management. An audit firm's tolerance for its audited company's earnings management is observed by predicting the probability that the audit firm would issue an unqualified audit opinion at the different levels of benchmark. The more the audit firms can tolerate their clients' discretionary accruals, the less the audit quality they provide.

The sample for this research includes 20,757 firm-year observations of 2,148 listed companies that traded on the stock markets in Indonesia, Malaysia, the Philippines, Singapore and Thailand during the period from 1992 to 2011. The findings of the tests are

reported as follows. Section 7.2 presents the empirical results. Section 7.3 gives the results of the robustness tests. Section 7.4 provides the conclusion and implications of the test.

7.2 EMPIRICAL RESULTS

This section begins with the results of descriptive statistics that observe audit firm selection behaviour and reported discretionary accruals among listed companies in Indonesia, Malaysia, the Philippines, Singapore and Thailand. It continues with the results of univariate and multivariate tests. The univariate tests include tests of the difference in mean and tests of the difference in median between the group of observations clustered by big/non-big selection or by high/low investor protection and tests of the correlation between each pair of variables. The multivariate tests are tests of the probit model.

7.2.1 DESCRIPTIVE STATISTICS

Since this chapter tests the influence of audit firm type and a country's investor protection system on audit quality, Section 7.2.1.1 uses descriptive statistics to analyse the selections of big/non-big firms first.

7.2.1.1 AUDIT FIRM SELECTION

A big firm is generally perceived to have higher audit quality than a non-big firm. However, non-big firms are selected more by listed companies than big firms in Southeast Asia. 70% of 20,757 firm-year observations were audited by this type of auditor. This is the opposite to the UK and the US where big firms have a high proportion of clients. Abidin, Beattie and Goodacre (2010) reported that big firms in the UK had a proportion of clients of about 70% of their sample during the period from 1998 to 2003. Butler et al. (2004) showed that 80% of their US sample for the period from 1980 to 1999 were audited by a big firm.

Figure 5: Distribution of Audit Firms

Malaysia

Big Firm Non-Big Firm

34%
66%

Singapore

Big Firm Non-Big Firm

38%
62%

Philippines

Big Firm Non-Big Firm

12%
88%

Thailand

Big Firm Non-Big Firm

20%
80%

Indonesia

Big Firm Non-Big Firm

28%
72%
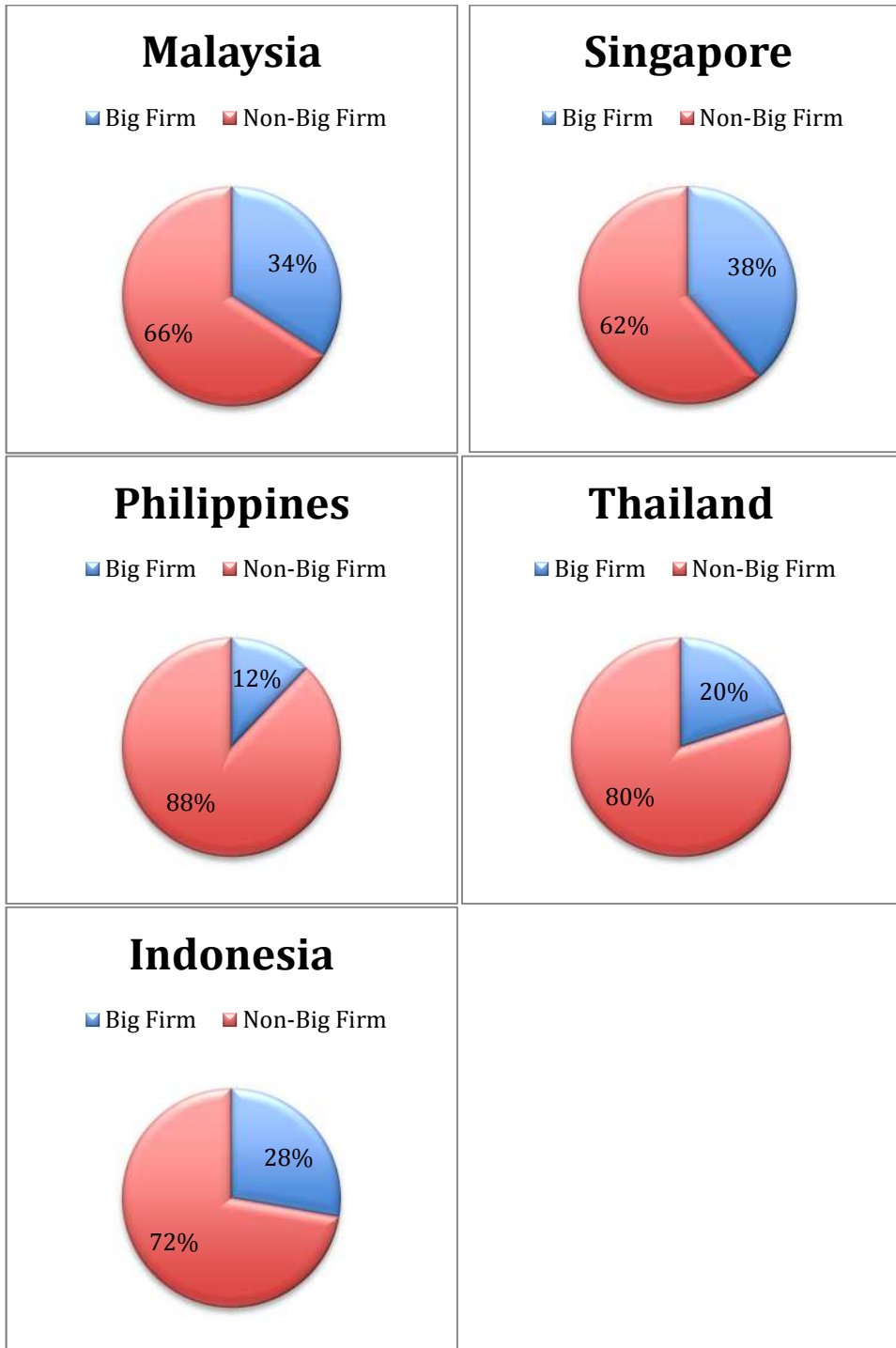
When we look at each country's big/non-big firm selections as shown in Figure 5 above, there are differences from one country to another. A high number of observations audited by a non-big firm in the Philippines (88%), Thailand (80%) and Indonesia (72%) indicate that non-big firms are particularly preferred in these countries. However, there is a smaller gap between the proportion of observations audited by a non-big firm (66%) and those audited by a big firm (34%) in Malaysia and between the proportion of observations audited by a non-big firm (62%) and those audited by a big firm (38%) in Singapore.

From the large proportion of those selecting a non-big firm in the Philippines, Thailand and Indonesia, which are all low level of investor protection countries, the author hypothesises that listed companies in low level investor protection countries may be more likely to employ a non-big firm as their auditor. On the other hand, those in high-level protection countries seem more willing to select a big firm. If we use audit reputation as a measure of audit quality, it is likely that a country with a higher level of investor protection is perceived to have a higher audit quality than a country with a lower level of investor protection.

Figure 6 on the next page shows the distribution of the employment of big firm auditors by country. It points to the fact that one of these big audit firms might be preferable to others in one country but not in other countries. For example, Ernst & Young (E&Y) is more selected in Malaysia, Singapore, the Philippines and Thailand while Deloitte & Touche (D&T) is the preferred choice in Indonesia. PricewaterhouseCoopers (PwC) and KPMG are also more selected in the Philippines. This may be because of the difference in audit fee strategies within the big firms and the perception that individual big firms may have different levels of audit quality. Importantly, there might be other factors that lead individual big firms' audit quality to be different across countries. For example, E&Y's audit quality in Malaysia might be different from E&Ys' audit quality in the other countries. This seems to support Maijoor and Vanstraelen's (2006) findings that individual big firms' audit quality in the UK, France and Germany are different from each other. Even the same big firm's audit quality can be different in different countries.

Figure 6: Distribution of the Selection of Big Firm Auditor by Country
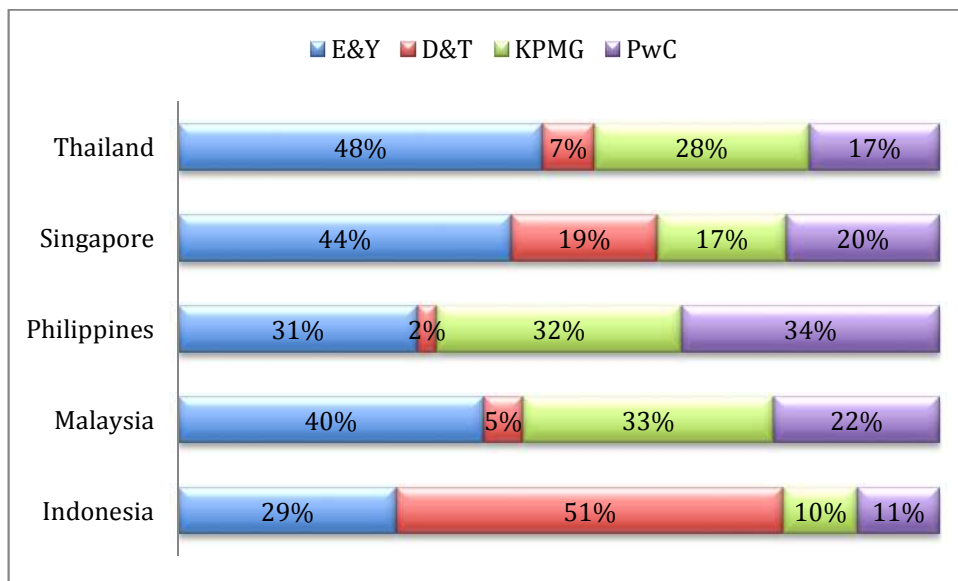
7.2.1.2 AUDIT OPINION

The database of 20,757 firm year observations consists of 18,557 (89%) with a clean opinion and 2,200 (11%) with an unclean opinion. Figure 7 below shows the breakdown of audit opinion by country.

Figure 7: Breakdown of Audit Opinion by Country

Indonesia

■ Unclean opinion
■ Clean opinion

34%

66%

Malaysia

■ Unclean opinion
■ Clean opinion

5%

95%

Philippines

■ Unclean opinion
■ Clean opinion

12%

88%

Singapore

■ Unclean opinion
■ Clean opinion

4%

96%

Thailand

■ Unclean opinion
■ Clean opinion

15%

85%
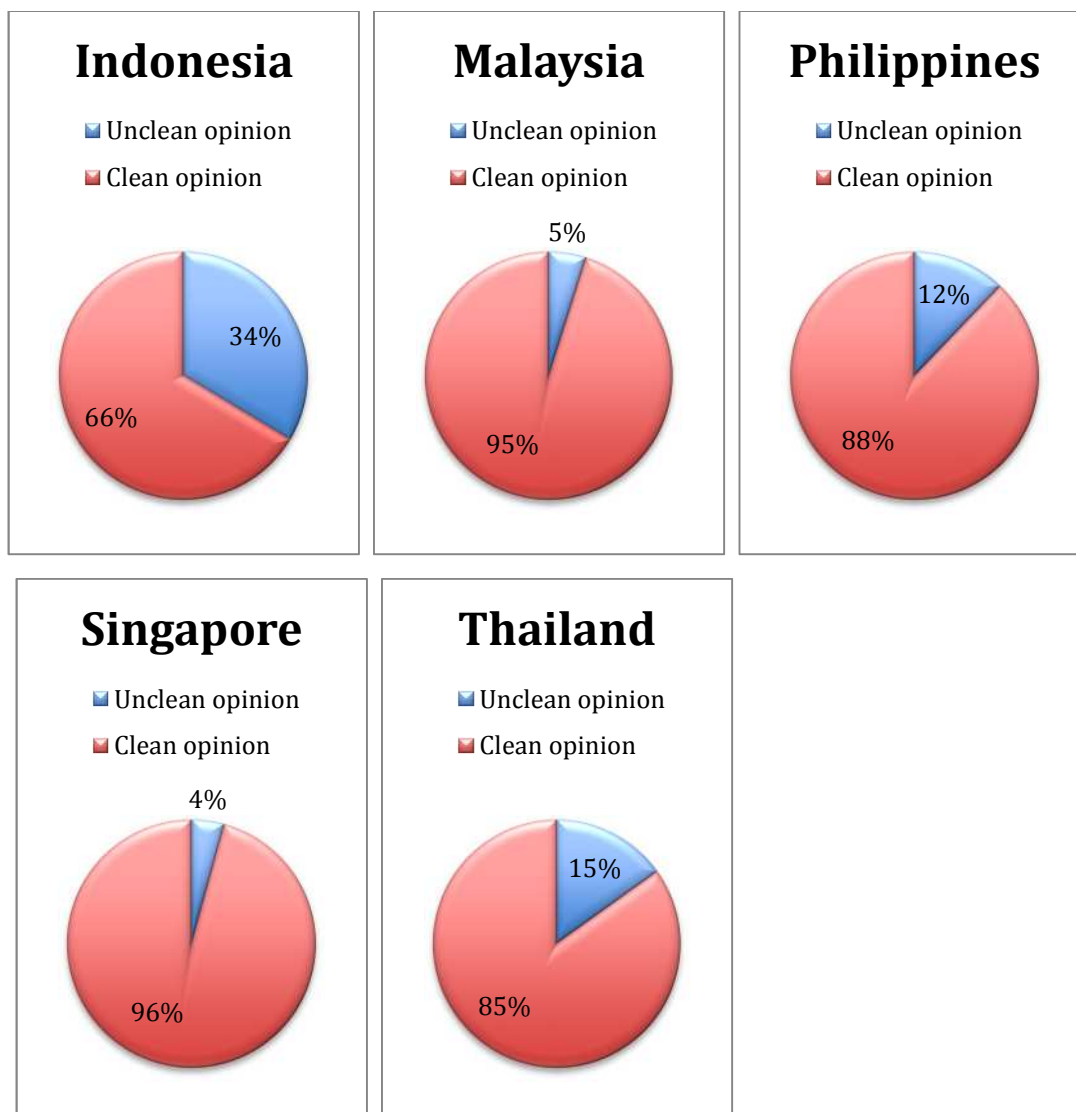
Audit firms from Indonesia are the least likely by some distance to issue clean audit report. Interestingly, audit firms from Singapore and Malaysia, where investors have a high level of investor protection, are more likely to issue a clean audit report than those from Thailand, Indonesia and the Philippines, where investors have a low level of investor protection. The high percentage of observations with a clean report may be owing to the fact that some stock markets strictly control listed companies' disclosure of financial information. They require listed companies to receive a clean audit report. For example, the Stock Exchange of Thailand (2012) has a policy that a listed company has to resubmit its financial statements within 180 days if its auditor draws a qualified opinion, an opinion indicating that the scope of audit work is limited by management or an adverse opinion. If the company does not comply it may be delisted. Moreover, the author speculates that, in

comparison to other countries, the lowest rate of a clean audit report in Indonesia may be due to the influence of national level factors that lead the audit firms are less likely to issue a clean audit report. This will be further observed throughout this thesis.

The breakdown of audit opinion by country here provides preliminary evidence that a country's level of investor protection may influence the audit firms' issuing clean audit report. We will further observe the influence of investor protection on the audit firms' issuances of clean audit report and audit quality by the univariate tests in Section 7.2.2 and the probit model tests in Section 7.2.3.

7.2.1.3 THE ASSOCIATION BETWEEN A CLEAN AUDIT REPORT AND REPORTED DISCRETIONARY ACCRUALS

Section 7.2.1.1 provides evidence that if we use the selections of a big/non-big firm to observe the differences in audit qualities, a country with a higher level of investor protection may be perceived to have a higher audit quality than a country with a lower level of investor protection because of its higher rate of selecting big firms. Audit quality may vary from firm to firm within the big firm group in one country and even among the same big firms in different countries. This section provides further observations of the relationship between a level of discretionary accruals and a clean audit report that might be different between types of audit firms in each country. It preliminarily observes audit firms' tolerance for their clients' earnings management measured by discretionary accruals without modifying their clean audit reports.

Figure 8 on the next page shows the distribution of reported discretionary accruals at different levels for firm-year observations that received clean audit reports in each country. From Figure 8, it remains unclear whether a big firm's and a non-big firm's tolerance for earnings management are different. However, it shows that big firms and non-big firms in all countries can tolerate either income-increasing (+) or income-decreasing (-) discretionary accruals at around 2.5%-5% of lagged total assets. This may imply that the magnitude of discretionary accruals at about 2.5%-5% of lagged total assets for either increasing or decreasing earnings is likely to be acceptable for big firms and non-big firms in all countries; however, there may be other factors that also alter audit opinion. For the

comparison of a big firm across a country, we still cannot draw the inference about the difference in a big firm's tolerance for its clients' discretionary accruals.

Other factors that can alter audit opinion are, for example, an accounting change and a going-concern issue. As found by Butler et al. (2004), 47% of 7,079 US modified opinions during 1994-1999 were unqualified opinions with explanatory language about some accounting change and 41% were unqualified opinions with going-concern paragraphs. From Butler et al.'s (2004) evidence, we can infer that the going-concern issue leads an auditor to consider drawing an unclean opinion. Therefore, it may be the case that an audited company reports a small level of discretionary accruals; however, an auditor still issues an unqualified audit report if there is an indication that the company is facing a going-concern problem.

Figure 8: Distribution of Discretionary Accruals Reported by Observations That Received Clean Audit Report and is Categorised by Type of Audit Firm and Country

Figure 8: Distribution of Discretionary Accruals Reported by Observations That Received Clean Audit Report and is Categorised by Type of Audit Firm and Country (continued)

Figure 8: Distribution of Discretionary Accruals Reported by Observations That Received Clean Audit Report and is Categorised by Type of Audit Firm and Country (continued)
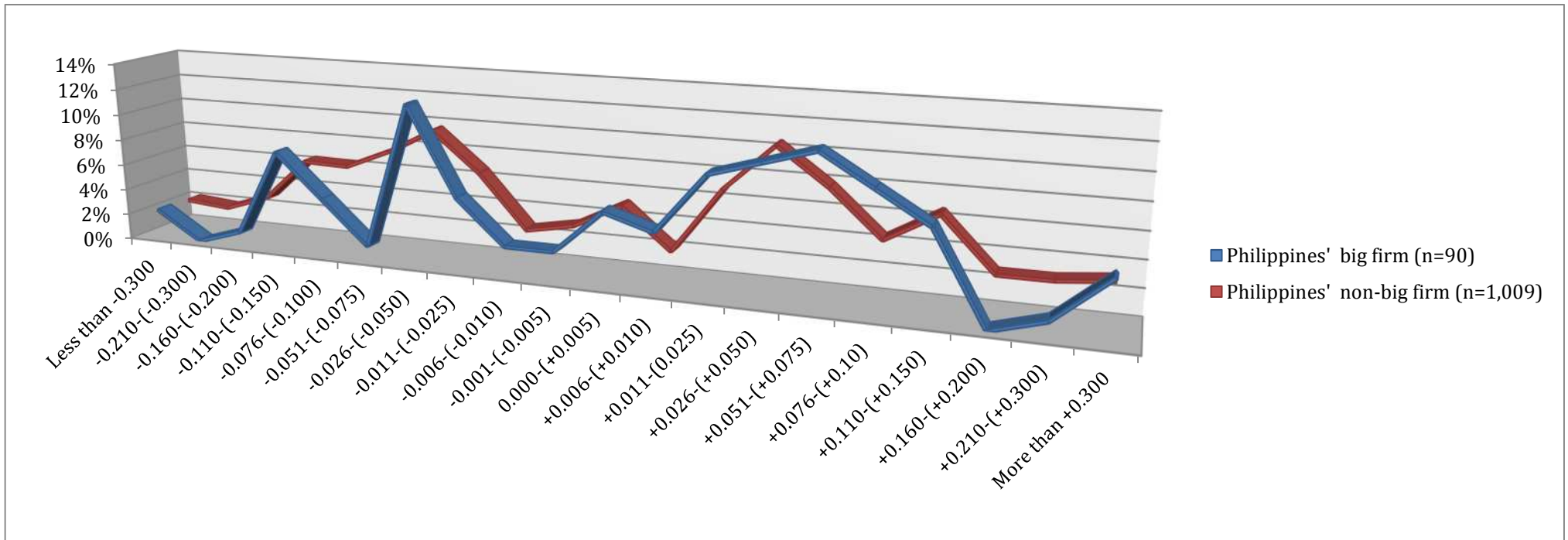
Figure 8: Distribution of Discretionary Accruals Reported by Observations That Received Clean Audit Report and is Categorised by Type of Audit Firm and Country (continued)

Figure 8: Distribution of Discretionary Accruals Reported by Observations That Received Clean Audit Report and is Categorised by Type of Audit Firm and Country (continued)

7.2.1.4 DESCRIPTIVE STATISTICS (n=20,757)

As noted in Chapter 6, extreme values of total accruals are taken to be observations with absolute values of (total accruals divided by lagged total assets) which are greater than five. They are considered as outliers and excluded. Empirical studies use different criteria for defining outliers, for example, the top and bottom 1 % of the distribution of all variables (Johnson et al., 2002), the top or bottom 0.5 % of the distribution of operating cash flows (Myers et al., 2003), the absolute value of total accruals scaled by lagged total assets being greater than 1 (Kothari et al., 2005), and the top and bottom 1 % of unexpected accruals (Maijoor and Vanstraelen, 2006). How to define outliers depends on the study's data and objectives and the accruals outliers observed. By scanning for outliers, a change in audit type is sometimes followed by an extreme value of accruals.

Following Kothari et al. (2005) and Maijoor and Vanstraelen (2006), the author considers the outliers only as the observations with extreme values of total accruals. Importantly, if we also define the outliers as the observations with extreme values of $DtoE$ or ROA, this would cause us to drop many observations and in turn to shorten the length of our panel data sets. The number of outliers is presented in Table 7 on 141.

Table 10 below reports the descriptive statistics of final observations that exclude accruals outliers.

Table 10: Descriptive Statistics (n=20,575)

	Mean	Std. Dev.	Min	25th	Median	75th	Max
DA	0.000	0.147	-3.166	-1.893	0.000	0.053	3.476
|DA|	0.084	0.121	0.000	0.000	0.053	0.105	3.476
ChangeAud	0.105	0.307	0	0	0	0	1
AudOpi	0.894	0.307	0	0	1	1	1
Tenure	5.080	3.401	1	1	4	7	20
ROA	-0.230	103.191	- 11,247.700	-3585.130	3.690	8.100	503.170
DtoE	1.185	71.324	- 1,088.030	-122.670	0.120	0.470	9,884.520
natTA	20.688	2.979	9.470	18.610	20.050	21.810	32.360
InvPro	0.613	0.487	0	0	1	1	1
DummyAud	0.300	0.458	0	0	1	1	1

Note: Variable definitions: *DA* is discretionary accruals scaled by lagged total assets;|DA| is absolute value of discretionary accruals; *ChangeAud* is a dummy variable and is equal to 1 if the observations switch auditor type, 0 otherwise; *AudOpi* is a dummy variable and is equal to 1 if the audit opinion is an unqualified opinion, 0 otherwise; *Tenure* is the number of consecutive years for which audit firms within the same group

were employed as the company's auditor; *ROA* is return-on-assets ratio; *DtoE* is debt-to-equity ratio; *natTA* is natural logarithm of total assets (USD); *InvPro* is Leuz et al.'s (2003) level of investor protection and is a dummy variable which is equal to 1 if that country is defined as a high investor protection country, 0 otherwise; and *DummyAud* is a dummy variable that is equal to 1 if firm i was audited by a big firm in year t and 0 otherwise.

From Table 10, we can see that listed companies from Southeast Asia have a level of reported discretionary accruals of approximately 8.40% of lagged total assets. They rarely switch between types of audit firms and are more likely to receive unqualified audit reports. Their audit firm type tenure is approximately 4-5 years. They also have a wide range of leverage, performance and size. Most listed companies are more likely to be audited by non-big firms and are from countries with a high level of investor protection. The next section provides further evidence of differences in characteristics of the final observations if they are clustered by big/non-big firm selection or by high/low investor protection and further evidence of the correlation between each pair of variables.

7.2.2 UNIVARIATE TESTS

The result of statistical tests in Section 7.2.1.1 leads the author to question whether a country with a higher level of investor protection may be perceived to have a higher audit quality than a country with a lower level of investor protection because of its higher selection of big firms. Section 7.2.1.2 also indicates that audit firms from countries with high level of investor protection are more likely to issue clean audit reports. By observing a level of discretionary accruals among the observations with a clean audit report in Section 7.2.1.3, there remains unclear evidence for the difference in the tolerance to earnings management between big firms and non-big firms and among big firms in different countries.

This section provides further evidence of differences in characteristics of the observations if they are clustered by big/non-big firm selection or by high/low investor protection and further evidence of the correction between each pair of variables. This further evidence may help us indicate that different discretionary accrual tolerances are explained by audit firm type and/or national level factors.

Since our measure of audit quality is discretionary accruals scaled by lagged total assets and many dummy variables (e.g. type of audit opinion, type of audit firm, switching of

audit firm) are used for our probit models tests, it may be difficult to draw the inferences only from the results of testing the differences in means/medians between the groups of the observations. This difficulty is due to the fact that values of these variables are not greater than 1; therefore, it may be the case that the tests report the statistical significance but the differences in means/medians between the groups of the observations may not be material. To derive more meaningful inferences from the results of testing the differences in means/medians between the groups of the observations, the author also considers the correlations between each pair of variables.

The results of testing the differences in means/medians between the groups of the observations are presented in Table 11 on Page 171. The upper half is the results of testing the differences in means/medians if the observations are clustered by audit firm type whilst the lower half is the results of testing the differences in means/medians if the observations are clustered by high/low investor protection.

Table 12 on Page 173 reports the correlation matrix between each pair of 8 variables. The correlation between each pair of variables is defined without considering the influence of other variables. The upper half is the Spearman correlation coefficients (r_s) and the lower half is the Pearson correlation coefficients (r_p). The analyses of both r_s and r_p help reduce misspecification of the correlation when only one method is selected. Since r_P and r_s here provide almost identical results, the relationships between each pair of variables are identified if both p-value of r_s and r_p are significant at the 0.01 level, except for r_p of the correlation between DA and $Tenure$ and for r_s of the correlation between $InvPro$ and $DtoE$ which are significant at p-value 0.1 and 0.05, respectively.

Table 11: Differences in Characteristics Between Observations Categorised by Audit Firm Type or by Investor Protection (n=20,557)

	A big firm (n=6,221)							A non-big firm (n=14,536)							T-test for differences in mean		Wilcoxon z-test for differences in median	
	Mean	Std. Dev.	Min	25th	Median	75th	Max	Mean	Std. Dev.	Min	25th	Median	75th	Max	P-value	Ha	P-value	Probability
DA	-0.003	0.138	-3.166	-0.049	0.000	0.051	2.603	0.001	0.151	-1.979	-0.055	0.000	0.054	3.476	0.015**	a<b	0.998	
|DA|	0.080	0.113	0.000	0.022	0.050	0.100	3.166	0.087	0.124	0.000	0.000	0.054	0.107	3.476	0.000***	a<b	0.000***	0.482
ChangeAud	0.108	0.310	0.000	0.000	0.000	0.000	1.000	0.105	0.307	0.000	0.000	0.000	0.000	1.000	0.604	a=b	0.604	
AudOpi	0.831	0.374	0.000	1.000	1.000	1.000	1.000	0.921	0.270	0.000	1.000	1.000	1.000	1.000	0.000***	a<b	0.000***	0.455
Tenure	4.900	3.162	1.000	2.000	4.000	7.000	19.000	5.157	3.496	1.000	3.000	4.000	7.000	20.000	0.000***	a<b	0.001***	0.485
ROA	0.783	24.000	-653.890	-0.180	3.380	7.560	503.170	-0.664	122.306	-11,247.700	0.050	3.820	8.330	194.250	0.086	a=b	0.000***	0.480
DtoE	0.659	14.227	-119.870	0.000	0.140	0.490	981.120	1.411	84.721	-1,088.030	0.000	0.110	0.460	9,884.520	0.300	a=b	0.001***	0.515
natTA	20.450	2.801	12.790	18.510	19.770	21.480	29.070	20.789	3.047	9.470	18.660	20.150	21.940	32.360	0.000***	a<b	0.000***	0.465
InvPro	0.736	0.441	0.000	0.000	1.000	1.000	1.000	0.560	0.496	0.000	0.000	1.000	1.000	1.000	0.000***	a>b	0.000***	0.588

	High investor protection (n=12,722)							Low investor protection (n=8,035)							T-test for differences in mean		Wilcoxon z-test for differences in median	
	Mean	Std. Dev.	Min	25th	Median	75th	Max	Mean	Std. Dev.	Min	25th	Median	75th	Max	P-value	Ha	P-value	Probability
DA	0.000	0.143	-3.166	-0.053	0.001	0.053	3.476	0.000	0.015	-2.140	-0.053	0.000	0.053	3.260	0.999	a=b	0.431	
|DA|	0.083	0.117	0.000	0.023	0.053	0.104	3.476	0.087	0.128	0.000	0.023	0.053	0.106	3.260	0.017**	a<b	0.856	
ChangeAud	0.079	0.027	0.000	0.000	0.000	0.000	1.000	0.147	0.354	0.000	0.000	0.000	0.000	1.000	0.000***	a<b	0.000***	0.466
AudOpi	0.954	0.210	0.000	1.000	1.000	1.000	1.000	0.800	0.400	0.000	1.000	1.000	1.000	1.000	0.000***	a>b	0.000***	0.577
Tenure	5.227	3.283	1.000	3.000	4.000	7.000	20.000	4.848	3.568	1.000	2.000	4.000	7.000	19.000	0.000***	a>b	0.000***	0.550
ROA	-0.678	83.506	-6,638.460	0.080	3.540	7.770	194.250	0.477	128.327	-11,247.700	-0.210	3.390	8.720	503.170	0.474	a=b	0.000***	0.484
DtoE	0.303	2.824	-158.300	0.010	0.110	0.400	67.090	2.582	114.573	-1,088.030	0.000	0.130	0.640	9,884.520	0.037**	a<b	0.001***	0.486
natTA	19.143	1.545	9.470	18.140	18.960	20.030	25.360	23.133	3.066	14.510	20.880	22.170	25.530	32.360	0.000***	a<b	0.000***	0.097
DummyAud	0.360	0.480	0.000	0.000	0.000	1.000	1.000	0.204	0.403	0.000	0.000	0.000	0.000	1.000	0.000***	a>b	0.000***	0.578

Table 11: Differences in Characteristics Between Observations Categorised by Audit Firm Type or by Investor Protection (n=20,557) (continued)

Note: Variable definitions: *DA* is discretionary accruals scaled by lagged total assets;|DA| is absolute value of discretionary accruals; *ChangeAud* is a dummy variable and is equal to 1 if the observations switch auditor type, 0 otherwise; *AudOpi* is a dummy variable and is equal to 1 if the audit opinion is an unqualified opinion, 0 otherwise; *Tenure* is the number of consecutive years for which audit firms within the same group were employed as the company's auditor; *ROA* is return-on-assets ratio; *DtoE* is debt-to-equity ratio; *natTA* is natural logarithm of total assets (USD); *InvPro* is Leuz et al.'s (2003) level of investor protection and is a dummy variable which is equal to 1 if that country is defined as a high investor protection country, 0 otherwise; and *DummyAud* is a dummy variable that is equal to 1 if firm *i* was audited by a big firm in year *t* and 0 otherwise.

Parametric *t*-statistics given here are from two-sample *t*-tests with equal variance if the assumption that observations audited by a big firm/from a high-level investor protection country (group a) and those audited by a non-big firm/from a low-level investor protection country (group b) have a similar variance of each variable is satisfied. If not, two-sample *t*-test statistics with unequal variance are chosen. The tests are based on diff=mean (a)-mean (b) and H0: diff=0. The acceptance of H0 (Ha: diff≠0) means that there is no difference of means between groups. The rejection of H0 (Ha: diff≠0) however indicates that there is the difference of means between groups, and then Ha: diff>0 or Ha: Diff<0 are tested. Nonparametric Wilconxon z-statistics for test of differences in medians between groups are two-sample Wilcoxon rank-sum (Mann-Whitney) tests. H0 is that there is no difference of median between groups. P [variable (a)>variable (b)] is the probability that the median of variable for group a is greater than median of variable for group b.

*, **, and *** indicate significant level of the difference at 0.10, 0.05, and 0.01 for a two-tailed test, respectively.

Table 12: Correlation Matrix (n=20,757)

n=20,757	DA	|DA|	AudFirm	ChangeAud	AudOpi	Tenure	ROA	DtoE	natTA	InvPro
DA			0.000	-0.015	0.055	-0.021	0.269	-0.020	0.011	0.006
			0.998	0.000***	0.000***	0.002***	0.000***	0.004***	0.105	0.431
|DA|			-0.029	0.006	-0.035	-0.035	-0.058	-0.072	-0.070	-0.001
			0.000***	0.365	0.000***	0.000***	0.000***	0.000***	0.000***	0.856
AudFirm	-0.146	-0.024		0.004	-0.133	-0.023	-0.032	0.025	-0.055	0.165
	0.035**	0.000***		0.604	0.000***	0.001***	0.000***	0.001***	0.000***	0.000***
ChangeAud	-0.010	0.004	0.004		-0.095	-0.536	0.009	0.023	0.098	-0.107
	0.141	0.583	0.604		0.000***	0.000***	0.202	0.001***	0.000***	0.000***
AudOpi	0.060	-0.046	-0.133	-0.095		0.095	0.160	-0.047	-0.230	0.244
	0.000***	0.000***	0.000***	0.000***		0.000***	0.000***	0.000***	0.000***	0.000***
Tenure	-0.013	-0.029	-0.035	-0.413	0.091		-0.071	-0.013	-0.053	0.085
	0.054*	0.000***	0.000***	0.000***	0.000***		0.000***	0.066*	0.000***	0.000***
ROA	0.166	-0.137	0.006	0.007	-0.023	-0.019		-0.153	0.092	-0.027
	0.000***	0.000***	0.355	0.353	0.001***	0.007***		0.000***	0.000***	0.000***
DtoE	-0.002	-0.005	-0.005	0.000	0.024	0.001	-0.001		0.236	-0.024
	0.780	0.500	0.487	0.969	0.002***	0.909	0.007***		0.000***	0.001***
natTA	0.006	-0.059	-0.052	0.096	-0.256	-0.532	0.048	0.011		-0.679
	0.369	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.114		0.000***
InvPro	0.000	-0.015	0.165	-0.107	0.244	0.054	-0.005	-0.016	-0.653	
	0.999	0.031**	0.000***	0.000***	0.000***	0.000***	0.000***	0.025**	0.000***	

Note: The upper half is the Spearman correlation coefficients and the lower half is the Pearson correlation coefficients. *, **, and *** indicate significant level of the coefficient at 0.10, 0.05, and 0.01 for one-tailed test, respectively.

The results of testing differences in means/medians between the groups of the observations and the results of testing the correlation between each pair of variables are discussed below.

1. The results in the first two rows and the first two columns of Table 11 above indicate that the correlations between DA and other variables and the correlations between $|DA|$ and other variables are inconsistent. DA has a positive correlation with $AudOpi$ and ROA but a negative correlation with $Tenure$. On the other hand, $|DA|$ has a negative association with $AudFirm$, $AudOpi$, $Tenure$, ROA and $natTA$. This points out that using DA or $|DA|$ as the Y-variable might be one cause that leads empirical studies to report different results on the difference in audit quality between a big firm and a non-big firm. For example, Bauwhede et al. (2003) used signed discretionary accruals. Their regression analyses found that big firms effectively limit income-increasing earnings management in Belgium. However, Jeong and Rho (2004) used the absolute value of discretionary accruals in their regression analyses but did not report differences in audit quality between big firms and non-big firms in Korea.

2. Mean DA (p-value 0.05) and mean $|DA|$ (p-value 0.01) of a non-big firm's clients are greater than those of a big firm's clients: and the probability that median $|DA|$ of a non-big firm's clients is greater than that of a big firm's clients is 0.518. On average, a non-big firm's clients reported DA by +0.1% of lagged total assets while a big firm's clients reported DA by -0.3%. Mean (median) $|DA|$ is 8.7% (5.4%) for a non-big firm's clients and 8% (5%) for a big firm's clients. However, $AudFirm$ is found to only have a negative correlation with $|DA|$. This negative correlation between $AudFirm$ and $|DA|$ indicates that discretionary accruals of a non-big firm's clients are approximately 2.4% or 2.5% higher than those of a big firm's clients. If we consider only a numerical number of discretionary accruals by the differences in mean and/or median, the evidence here supports the empirical findings (e.g., Becker et al., 1998 and Larcker and Richardson, 2004) that reported discretionary accruals of a big firm's clients are lower than those of a non-big firm's clients. However, we can see that the differences in means/medians of discretionary accruals between these two groups of the observations are not material. Therefore, there remains unclear evidence that a big firm is less or more able to tolerate earnings management than a non-big firm.

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3. Only mean $|DA|$ (p-value 0.05) of the observations from countries with a low level of investor protection is greater than that of those from countries with a high level of investor protection. However, average $|DA|$s of these two groups of the observations are not materially different. The observations from countries with a low level of investor protection reported an average $|DA|$ of 8.7% of lagged total assets whilst those from countries with a high level of investor protection reported an average $|DA|$ of 8.3%. In addition, there is no relationship between $InvPro$ and $|DA|$. Therefore, similarly to audit firm type, we are unable to identify the influence of investor protection on discretionary accruals.

4. Means and medians $ChangeAud$ of the observations audited by big/non-big firm are not different. Also, $ChangeAud$ does not correlate with $AudFirm$. This indicates that big/non-big firms were equally selected if audited companies had changed their auditors. On the other hand, mean and median $ChangeAud$ of observations from countries with a low level of investor protection are greater than those of the observations from countries with a high level of investor protection are significant different at p-value 0.01. In addition, $InvPro$ also has a negative correlation with $ChangeAud$ at p-value 0.01. This indicates that, in countries with a low level of investor protection, audited companies were more likely to switch an audit between types of audit firms.

5. At p-value 0.01, mean and median $AudOpi$ of a non-big firm's clients are greater than those of a big firm's clients, and $AudOpi$ negatively correlates with $AudFirm$. Also, mean and median $AudOpi$ of the observations from countries with a high level of investor protection are greater than those of the observations from countries with a low level of investor protection, and $AudOpi$ positively correlates with $InvPro$. This indicates that, in comparison to a non-big firm, a big firm is less likely to issue a clean audit report and that, in comparison to audit firms from countries with a low investor protection, those from countries with a high level of investor protection are also more likely to issue a clean audit report.

6. Mean and median $Tenure$ of a non-big firm's clients are greater than those of a big firm's clients at p-value 0.01. Mean (Median) $Tenure$ of a non-big firm's clients is 5.157 years (4.000 years) whilst mean (median) $Tenure$ of a big firm's clients is

4.900 years (4.000 years). A negative correlation between $Tenure$ and $AudFirm$ also implies that non-big firms have approximately 2.3% or 3.5% longer client relationship than big firms. The minimal difference in means and medians $Tenure$ and the minimal coefficient of the correlation between $Tenure$ and $AudFirm$ indicate that length of audit firm tenure may not be materially different between big firms and non-big firms. On the other hand, mean (median) $Tenure$ is 5.227 years (4.000 years) for the observations from countries with a high level of investor protection and 4.848 years (4.000 years) for those from countries with a low level of investor protection. These two groups' means and medians are significantly different at p-value 0.01. In addition, $Tenure$ and $InvPro$ are found to have a positive correlation, showing that length of audit firm tenure in countries with a high level of investor protection is approximately 8.5% or 5.4% greater than that in countries with a low level of investor protection. Similarly to the comparison of audit firm tenure between big firms and non-big firms, the minimal difference in means and medians and the minimal coefficient of correlation between $Tenure$ and $InvPro$ indicate that length of audit firm tenure may not be materially different across countries.

7. Only median ROA of a non-big firm's clients is lower than that of a big firm's clients at p-value 0.01 and only median $DtoE$ of a non-big firm's clients is greater than that of a big firm's clients at p-value 0.01. However, there is no correlation between ROA and $AudFirm$ and between $DtoE$ and $AudFirm$. Therefore, there remains unclear evidence that audit firm type is associated with clients' performance measured by ROA and financial leverage measured by debt-to-equity ratio.

8. A country's investor protection is found to be associated with clients' performance and financial leverage. Median ROA of the observations from countries with a high level of investor protection is slightly lower than that of those from countries with a low level of investor protection. Median ROA of the observations from countries with a high level of investor protection is 3.54% whilst median ROA of those from countries with a low level of investor protection is 3.39%. This is supported by a negative correlation between ROA and $InvPro$. The correlation also indicates that ROA of the observations from countries with a high level of investor protection is

approximately 0.5% or 2.7% lower than that of those from countries with a low level of investor protection.

Mean and median $DtoE$ of the observations from countries with a low level of investor protection are greater than that of those from countries with a high level of investor protection. Mean (median) $DtoE$ is 2.582 (0.130) for the observations from countries with a low level of investor protection and 0.303 (0.110) for those from countries with a high level of investor protection. Moreover, $DtoE$ has a negative correlation with $InvPro$. This indicates that the observations from countries with a low level of investor protection have higher financial leverage than those from countries with a high level of investor protection.

9. At p-value 0.01, mean and median $natTA$ of non-big firms' clients are greater than those of big firms' clients. Also, $natTA$ and $AudFirm$ has a negative correlation. This indicates that non-big firms' clients are larger in size measured by a natural logarithm of total assets. At p-value 0.01, mean and median $natTA$ of the observations from countries with a low level of investor protection are greater than those of the observations from countries with a high level of investor protection. This is strengthened by a negative correlation between $natTA$ and $InvPro$. This indicates that observations from countries with a low level of investor protection are also larger in size.

10. Mean and median $InvPro$ of a big firm's clients are greater than those of a non-big firm's clients at p-value 0.01. On the other hand, mean and median $AudFirm$ of the observations from countries with a high level of investor protection are found to be higher than those of the observations from countries with a low level of investor protection at p-value 0.01. $AudFirm$ also has a positive correlation with $InvPro$. This is evidence that big firms are selected more in high investor protection countries. This evidence strengthens Section 7.2.1.1's finding that the higher the level of investor protection the country has, the more the big firms are employed. Therefore, a country with a higher level of investor protection may be perceived to have a higher audit quality than a country with a lower level of investor protection.

To summarise the findings of this section, there remains unclear evidence for the influence of audit firm type and a country's investor protection on discretionary accruals. If big firms are of higher audit quality than non-big firms, the author raises doubts that switching of an audit from a big firm to a non-big firm, especially in a country with a low level of investor protection may impair audit quality. Non-big firms in Southeast Asia and big firms from countries with a high level of investor protection may be more likely to tolerate their clients' earnings management since they find it easier to issue clean audit reports. Importantly, maintaining clients may be the reason why big firms and non-big firms in Southeast Asia are more tolerant of discretionary accruals. The next section will use the probit models tests to address these doubts.

7.2.3 MULTIVARIATE TESTS

In the probit models tests, an artificial audit materiality level is set up. This artificial audit materiality level is defined in this thesis as an audit accepted level of discretionary accruals or a benchmark (hereafter benchmark) which is used to assess audit quality. The benchmark runs from 0.5% through 1%, 2.5%, 5%, 7.5%, 10%, 15%, 20% to 30% of lagged total assets. It is believed that auditors should be tolerant of a level of discretionary accruals below these benchmarks without modifying their audit opinions. Therefore, the fundamental logic of this test is that the more the audit firms can tolerate their clients' discretionary accruals, the less the audit quality they provide. Importantly, using these different levels of benchmark identifies the difference in audit quality between audit firm types and among audit firms across countries. Audited companies' size, performance and leverage are controlled for engagement level factors that may impact audit quality. Table 13 below presents the results of this probit model.

Table 13: Results of Probit Model (n=20,757)

AudQua	Expected sign	Trend	Audit accepted levels of discretionary accruals							
			0.5%		1.0%		2.5%		5.0%	
			Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
AudRank	-	Increase	-0.527	0.000 ***	-0.393	0.000 ***	-0.232	0.000 ***	-0.105	0.000 ***
Tenure	nil	No change	-0.033	0.000 ***	-0.016	0.000 ***	0.000	0.911	0.012	0.000 ***
ChangeAud	+/-	Decrease/Increase	0.074	0.069 *	0.105	0.005 ***	0.075	0.025 **	0.034	0.299
DtoE	n/a	n/a	0.000	0.550	0.000	0.572	0.000	0.488	0.000	0.443
ROA	n/a	n/a	0.000	0.328	0.000	0.455	0.000	0.750	0.001	0.021 **
natTA	n/a	n/a	0.014	0.163	0.030	0.001 ***	0.045	0.000 ***	0.058	0.000 ***
InvRank										
2_Malaysia	-	Increase	0.105	0.042 **	0.102	0.013 **	0.098	0.002 ***	0.106	0.000 ***
3_Thailand	-	Increase	0.566	0.000 ***	0.360	0.000 ***	0.167	0.000 ***	0.002	0.970
4_Indonesea	-	Increase	0.985	0.000 ***	0.610	0.000 ***	0.138	0.045 **	-0.281	0.000 ***
5_Philippines	-	Increase	0.576	0.000 ***	0.350	0.000 ***	0.088	0.127	-0.099	0.081 *
Constant			-1.352	0.000 ***	-1.444	0.000 ***	-1.366	0.000 ***	-1.237	0.000 ***
LR statistics			833.660		487.02		209.66		258.09	
Log likelihood			-7,965.793		-9,738.656		-12,719.002		-14,132.731	
Pseudo R2			0.045		0.028		0.012		0.006	

Table 13: Results of Probit Model (n=20,757) (continued)

AudQua	Expected sign	Trend	Audit accepted levels of discretionary accruals									
			7.5%		10.0%		15.0%		20.0%		30.0%	
			Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
AudRank	-	Increase	-0.009	0.688	0.096	0.000 ***	0.262	0.000 ***	0.423	0.000 ***	0.423	0.000 ***
Tenure	nil	No change	0.018	0.000 ***	0.022	0.000 ***	0.027	0.000 ***	0.031	0.000 ***	0.031	0.000 ***
ChangeAud	+/-	Decrease/Increase	0.015	0.653	0.034	0.332	-0.053	0.157	-0.063	0.123	-0.063	0.123
DtoE	n/a	n/a	-0.001	0.287	0.000	0.307	0.000	0.257	0.000	0.295	0.000	0.295
ROA	n/a	n/a	0.002	0.000 ***	0.003	0.000 ***	0.003	0.000 ***	0.000	0.013 **	0.000	0.013 **
natTA	n/a	n/a	0.063	0.000 ***	0.068	0.000 ***	0.062	0.000 ***	0.071	0.000 ***	0.071	0.000 ***
InvRank												
2_Malaysia	-	Increase	0.136	0.000 ***	0.158	0.000 ***	0.158	0.000 ***	0.080	0.126	0.080	0.126
3_Thailand	-	Increase	-0.096	0.026 **	-0.222	0.000 ***	-0.363	0.000 ***	-0.598	0.000 ***	-0.599	0.000 ***
4_Indonesea	-	Increase	-0.504	0.000 ***	-0.735	0.000 ***	-1.051	0.000 ***	-1.419	0.000 ***	-1.419	0.000 ***
5_Philippines	-	Increase	-0.192	0.002 ***	-0.249	0.000 ***	-0.351	0.000 ***	-0.568	0.000 ***	-0.568	0.000 ***
Constant			-1.050	0.000 ***	-0.961	0.000 ***	-0.489	0.007 ***	-0.378	0.063	-0.378	0.063
LR statistics			411.87		587.86		805.5		1013.63		1013.63	
Log likelihood			-13,486.202		-12,256.205		-9,806.395		-8,227.249		-8,227.249	
Pseudo R2			0.008		0.012		0.025		0.035		0.035	

Table 13: Results of Probit Model (n=20,757) (continued)

Note: The model is $\Pr(AudQua)_{it} = \alpha + \beta_1 AudRank_{it} + \beta_2 Tenure_{it} + \beta_3 ChangeAud_{it} + \beta_4 ROA_{it} + \beta_5 DtoE_{it} + \beta_6 natTA_{it} + \beta_{7-10} InvRank_p + v_{it}$; where

$AudQua_{it}$	=	audit quality for firm i in year t and is equal to 0 if $Over_{it}$ & $Clean_{it}$ or $Under_{it}$ & $UnClean_{it}$; and 1 if $Under_{it}$ & $Clean_{it}$ or $Over_{it}$ & $UnClean_{it}$;
$Over_{it}$	=	$[|DA_{it}| - AcceptedDA] > 0$;
$Under_{it}$	=	$[|DA_{it}| - AcceptedDA] < 0$;
$Clean_{it}$	=	clean opinion;
$UnClean_{it}$	=	other opinions;
$AcceptedDA$	=	an audit accepted level of discretionary accruals;
$|DA_{it}|$	=	an absolute value of discretionary accruals for firm i in year t;
$AudRank_{it}$	=	the rank of audit firm type for firm i in year t which is equal to 1 if the audit firm type is a big firm and 2 if the audit firm type is a non-big firm ;
$Tenure_{it}$	=	the number of consecutive years for which audit firms within the same type were employed as the listed company's auditor for firm i at year t;
$ChangeAud_{it}$	=	a dummy variable which is equal to 1 if firm i in year t switches audit firm type, 0 otherwise;
ROA_{it}	=	return on assets for firm i in year t which is the Compustat item ROA or is computed as $[net\ income_{it}\ (IB)/total\ assets_{it}\ (AT)]\ x100$;
$DtoE_{it}$	=	debt to equity ratio which is computed as $[long-term\ deb_{it}(DLTT) + current\ portion\ of\ long-term\ debt_{it}(DD1)]\ /\ total\ stockholders'equity_{it}\ (SEQ)$;
$natTA_{it}$	=	a natural logarithm of total assets (USD) for firm i in year t;
$InvRank_p$	=	the rank of the World Bank Organisation's level of investor protection for country p;
v_{it}	=	unspecific random effects for firm i in year t;
i	=	1,…,I firm index;
p	=	Indonesia, Malaysia, the Philippines, Thailand or Singapore; and
t	=	1,…,T_i, year index.

*, **, and *** indicate significant level of the coefficient at 0.10, 0.05, and 0.01, one-tailed test for predicted sign , all others are two-tailed test, respectively.

Pseudo R^2 is computed as ($Log\ Likelihood\ value\ of\ the\ constant-only\ model - Log\ Likelihood\ value\ of\ the\ model$)$/Log\ Likelihood\ value\ of\ the\ constant$. (Gould, 2001)

7.2.3.1 IS A BIG FIRM LESS TOLERANT OF A HIGH LEVEL OF DISCRETIONARY ACCRUALS THAN A NON-BIG FIRM?

AudRank is to test whether a big firm is of higher audit quality than a non-big firm. As a big firm is perceived to have higher audit quality than a non-big firm, a big firm is used as the base case. The test as reported in Table 13 above found that the coefficients of *AudRank* continually increase when the benchmark increases by one level. The coefficient gradually increases from –0.527 at the benchmark 0.5% to +0.423 at the benchmark 30%. This indicates that, at low levels of benchmark, a non-big firm has a lower probability of being defined as a high quality audit provider than a big firm. However, at high levels of benchmark, a non-big firm has a greater probability of being defined as a high quality audit provider than a big firm. This shows that a non-big firm is more tolerant of a high level of discretionary accruals than a big firm.

Considering audit quality by the joint association between a level of discretionary accruals and a type of audit report here provides evidence that a big firm is less tolerant of discretionary accruals than a non-big firm. A big firm is unable to tolerate a high level of discretionary accruals without modifying their unqualified audit opinion. This evidence suggests that a big firm has higher audit quality than a non-big firm. **$Hypothesis_0$ 1** is accepted.

This thesis's result that a big firm is of higher audit quality than a non-big firm is consistent with Francis and Krishnan (1999) and Becker et al. (1998). Francis and Krishnan (1999) found that only a big 6 firm has reporting conservatism for high levels of accruals. They also pointed out that, owing to audit conservatism, big firms are perceived as higher audit quality providers. Meanwhile Becker et al. (1998) reported that clients audited by a big 6 firm report discretionary accruals less than those audited by a non-big 6 firm. This led Becker et al. (1998) to conclude that a big 6 firm has higher audit quality than a non-big 6 firm.

This thesis's result indicates that a big firm is less tolerant of earnings management through discretionary accruals than a non-big firm because a big firm may be more aware of its reputation; therefore, a big firm may be unable to tolerate a client's abnormal accruals (Larcker and Richardson, 2004). In addition, loss of reputation significantly

affects audit firms and their clients, especially in the case of a big firm. When the mass media have reported a big audit firm's failure, the stock prices of its other audited clients often drop sharply, for instance the case of Andersen's audit failure associated with Enron's accounting manipulation in 2001-2002 (Chaney and Philipich, 2002) and the case of KPMG's failure to report ComROAD's accounting scandal in 2002 in Germany (Weber, Willenborg and Zhang, 2008). Some existing audit clients left audit firms (Weber et al., 2008). Similarly to previous studies, this thesis underscores that maintaining reputation and avoiding audit failure may thus lead a big firm to be more conservative than a non-big firm.

7.2.3.2 HOW DO NATIONAL LEVEL FACTORS INFLUENCE AUDIT QUALITY?

InvPro is to observe the impact of a country's level of investor protection on audit quality. The test's assumption is that the stronger the level of investor protection the country has, the higher the audit quality. In this region, Singapore is perceived to have the strongest investor protection. Therefore, Singapore is used as the base case.

Malaysia's coefficients of *InvPro* increase in line with the increase in the level of benchmark. Increasing by one level of benchmark also increases the coefficient. The coefficient is +0.042 at the benchmark 0.5%, slightly increases and reaches +0.158 at the benchmark 15%. This means that, in comparison to audit firms from Singapore, those from Malaysia have a higher probability of being defined as a high quality audit provider at almost every level of benchmark. It can be also inferred that audit firms from Malaysia are more flexible than those from Singapore. They are tolerant of high levels of discretionary accruals without modifying their audit opinions.

However, the trends of the coefficients of the remainder of countries are almost identical. Their coefficients gradually drop when the benchmark increases by one level. Thailand's coefficients of *InvPro* gradually reduce from +0.566 to -0.599 as the benchmark continually increases from 0.5% to 30%. Indonesian's coefficient of *InvPro* is +0.985 at the benchmark 0.5%, continually decreases and finally hits -1.419 at the benchmark 30%. Increasing the benchmark by one level also leads the Philippines' coefficients of *InvPro* to gradually reduce from +0.567 at the benchmark 0.5% to -0.568 at the benchmark 30%. From these findings, it can be deduced that, at low levels of benchmarks, audit firms from Thailand, Indonesia and the Philippines have higher probabilities of being defined as high

quality audit providers than those in Singapore. However, high levels of benchmarks lower this possibility. This is evidence that audit firms from Thailand, Indonesia and the Philippines are less tolerant of a high level of discretionary accruals.

Findings here reject **_Hypothesis$_0$ 2_** that the higher level of investor protection the country has, the higher the audit quality at national level. Even though Thailand, Indonesia and the Philippines are perceived to have lower investor protection than Singapore and Malaysia, evidence here shows that audit firms from Thailand, Indonesia and the Philippines are less tolerant of discretionary accruals. These findings also support Bauwhede et al.'s (2003), Jeong and Rho's (2004), Piot and Janin's (2007) and Maijoor and Vanstraelen's (2006) conclusions that highlight the influence of national level factors on audit quality by testing the influence of a country's investor protection on audit quality.

Moreover, the findings here can be interpreted that, in comparison to the audit firms from Singapore, those from Thailand, the Philippines and Indonesia are more conservative than Malaysia and Singapore because they are less tolerant of discretionary accruals. Malaysia is more flexible because they are most tolerant of discretionary accruals whilst Singapore is in the middle of these two groups. These findings question why these three groups of countries have different levels of audit conservatism. Therefore, it is of interest to identify other national level factors than a country's investor protection that lead to the difference in audit quality at a national level. Other national level factors that influence audit quality will be identified from obtained qualitative evidence in Chapter 8 and Chapter 9 will quantitatively test their influences on audit quality.

7.2.3.3 HOW DO FIRM LEVEL FACTORS INFLUENCE AUDIT QUALITY?

Tenure and *ChangeAud* are used to test the influence of firm level factors. These firm level factors were identified in Chapter 4 and are, for example, audit reputation, industry specialist, audit methodologies. *Tenure* is the number of consecutive years for which audit firms within the same type were employed as the listed company's auditor. Therefore, it can be either audit tenure of audit firms within the same type or audit tenure of a single audit firm.

In general, we have assumed that there is no difference in audit quality within the same type of audit firms and even among individual auditors within the same audit firm. Therefore, we have classified audit firms as a big firm or a non-big firm. The author also tests this assumption. Owing to this assumption, audit firm type tenure is expected not to influence audit quality. Hence, the coefficients of *Tenure* are expected to be insignificant at all levels of benchmark.

However, the test found that the coefficient of *Tenure* continually increases when the benchmark for assessing audit quality increases by one level. Coefficients of *Tenure* are -0.033 at the benchmark 0.5% and -0.016 at the benchmarks 1%. However, the coefficient of *Tenure* slightly rises from +0.012 at the benchmark 2.5% to +0.031 at the benchmark 30%. This indicates that one more year of audit experience in the same type of audit firm increases the probability of being defined as a high quality audit provider. The audit firms within the same type may be differently tolerant of discretionary accruals. In other words, audit quality may vary from firm to firm within the same type of audit firm. This rejects *Hypothesis$_0$ 3* that there is no difference in audit quality within the same type of audit firm.

In the case of a single firm's audit tenure, the rejection of *Hypothesis$_0$ 3* is also evidence that audit tenure may lead to an audit firm to be more tolerant of discretionary accruals. Therefore, in practice, it may be the case that an audited client engages in earnings management over a period of time and an audit firm may be unable to observe its client's earnings management. Discretionary accruals then accumulate. As Healy (1985) and Pourciau (1993) found, accumulated and undetected discretionary accruals are removed only when managers are leaving the companies. Healy (1985) pointed out that managers use accruals to switch reported earnings between periods and the sum of these discretionary accruals should be zero during the period of a manager's employment. Pourciau (1993) believed that, before leaving the company, a manager has to remove all accruals that he/she used to maximise accounting-based compensations. The accumulated and undetected discretionary accruals also lead the author to raise doubt as to whether earnings management is an acceptable practice among listed companies and auditors.

Furthermore, levels of audit materiality may increase when an audit firm has a long relationship with their clients: an auditor is then suspected of being more tolerant of a high level of discretionary accruals. This supports Carey and Simnet's (2006) findings that

Australian audit partners are less likely to issue going-concern opinions when they have long relationship with their clients.

$ChangeAud$ captures the difference in audit quality between type of audit by big/non-big firms following a switching of audit between these two types of audit firms. Since a big firm and a non-big firm are generally perceived to have different level of audit quality, the switching of an audit between these two types of audit firms should capture the difference in audit quality between them. Therefore, the coefficients of $ChangeAud$ are expected to be a positive/negative sign. A positive coefficient means that switching audit firm type increases the probability that successor audit firms would be defined as a high quality audit provider. If so, this indicates that big firms have a difference in audit quality to non-big firms.

The test reports that coefficients of $ChangeAud$ are +0.074, +0.105 and +0.075 at the benchmarks 0.5%, 1% and 2.5%, respectively. This indicates that, at a low benchmark, switching audit firm type increases the probability that successor audit firms would be defined as a high quality audit provider. Therefore, at the benchmarks 0.5%, 1% and 2.5%, the tests can capture the difference in audit quality between types of audit big/non-big firms. However, coefficients of $ChangeAud$ are insignificant at the benchmark greater than 2.5%. This indicates that, at the benchmarks above 2.5%, switching audit firm type does not impact the probability that successor audit firms would be defined as a high quality audit provider. This means that if the test uses a high level of benchmark for assessing audit quality, we cannot detect the difference in audit quality between types of audit big/non-big firms.

According to the result of $ChangeAud$, **$Hypothesis_0$ 4** that there is the difference in audit quality between types of audit big/non-big firm is accepted. The result of $ChangeAud$ also strengthens the result of $Tenure$ that audit quality not only varies from firm to firm within the same type but also according to type of audit firm. In other words, both results of $ChangeAud$ and $Tenure$ indicate that firm level factors influence audit quality.

Importantly, the test of $ChangeAud$ provides evidence that switching audit firm type may help promote audit quality only when a successor audit firm sets a lower level of audit materiality in their first year audits. Having a lower level of audit materiality can imply that the successor audit firm may be more vigilant in the first year audits after switching

audit firm. Supporting evidence here includes, for example, as reported by Krishnan (1994), the fact that auditors use more conservative judgements for new clients. In addition, Krishnan and Stephens (1995) pointed out that switching auditor may not help a company succeed in opinion shopping. This is due to Krishnan and Stephens' (1995) interpretation that predecessor and successor auditors do not treat the company differently or that the regulators are successful in monitoring the opinion shopping. For this thesis's purpose, the opinion shopping may occur when audited companies select audit firms who are more tolerant of discretionary accruals without modifying their clean auditor reports.

From the tests of **Hypothesis$_0$ 1**, **3** and **4**, it can be deduced that firm level factors lead audit quality to vary from firm to firm. If accumulated and undetected discretionary accruals stem from the difference in audit firms' audit qualities that are tested by an accepted level of discretionary accruals, long audit firm tenure then impairs audit quality. Therefore, switching audit firm types may be effective to promote audit quality, especially when successor audit firms are more conservative in their first year audit of new clients.

7.2.3.4 HOW DO ENAGEMENT LEVEL FACTORS ALSO IMPACT AUDIT QUALITY?

$DtoE$, ROA and $natTA$ are used to control the influence of engagement level factors on audit quality. The coefficients of $DtoE$ are found to be insignificant at all levels of benchmark. This is evidence that an audited company's leverage does not impact audit quality. However, the coefficients of ROA are at approximately +0.000-(+0.003) at the benchmarks above 5%. This indicates that audited companies' performances measured by ROA weakly impact audit quality. Increasing audited companies' performances measured by ROA only slightly increases the probability that an audit firm would be defined as a high quality audit provider. This can still be interpreted to mean that audit firms may be more tolerant of audited clients with high performances and that this may impair audit quality.

Missing analysts' earnings forecasts might lead investors to devalue listed companies' stock prices. The listed companies are then under pressure to achieve the analysts' earnings forecasts (Burgstahler and Eames, 2006). They need to manage reported earnings upwards and as a consequence, they report high discretionary accruals. This might be the reason

why high-performance firms have large discretionary accruals. Audited companies with a high performance might also wield power on their auditors in order to receive a favourable audit report even though they report a high level of discretionary accruals. As found by Reichelt and Wang (2010), auditors are less likely to issue going-concern opinions for audited clients that have high profitability. This finding by Reichelt and Wang (2010) and the findings here are evidence that audit firms may also have an incentive not to adjust the impacts of these discretionary accruals reported by listed companies with high performance. This could be to help them maintain their audited clients, since losing important clients might cause the audit firms financial difficulty.

Similarly to ROA, $natTA$ has a coefficient at approximately +0.030-(+0.071) at benchmarks higher than 0.5%. This provides evidence that client size measured by the natural logarithm of total assets significantly increases the probability that a big firm and a non-big firm would issue a clean audit report with a high level of discretionary accruals. This finding not only supports Bauwhede et al. (2003) and Jeong and Rho (2004) that large audited clients engage more in earnings management but also adds further evidence that audit firms may be more tolerant of high levels of discretionary accruals reported by large clients. In addition, large audited clients may put pressure on their auditors. For example, as found by Reichelt and Wang (2010), auditors are less likely to issue large firms with a going-concern opinion. Even though the audit firm may detect earnings management, for a large audit client, they may not request the audited company to adjust the impacts of this earnings management on the financial statements or may not modify their audit opinions. Also, the audit firm may sometimes be not allowed to adjust the impacts of this earnings management on the financial statements or to modify their audit opinion because their client wields power on them.

7.3 ROBUSTNESS TEST

The probit model in the previous section provided evidence that big firms are of higher audit quality than non-big firms and that national, firm and engagement level factors influence audit quality. Audit firms from countries with a high level of investor protection seem to be more tolerant of discretionary accruals than those from countries with a low level of investor protection. Firm level factors and audited company size and performance

are found to impact audit quality. Therefore, audit quality may vary from firm to firm or even from engagement to engagement.

The robustness test in this section extends the previous section's findings. The test procedure in this section is similar to the previous section; however, it focuses primarily on the joint influence of audit firm type (i.e. big/non-big firm), investor protection, audit firm tenure and switching audit firm. To produce the joint-effect variables, the robustness test uses the dummy variables *DummyAud* and *LeuzInv* instead of *AudRank* and *InvRank* as used in the previous section. Using ordinal variables *AudRank* and *InvRank* are problematic in producing the joint-effect variables. The results of the robustness test are shown in Table 14 below.

Table 14: Results of Robustness Test (n=20,757)

AudQua	expected sign	Trend	Audit accepted levels of discretionary accruals							
			0.5%		1.0%		2.5%		5.0%	
			Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
DummyAud	+	Decrease	0.568	0.000 ***	0.489	0.000 ***	0.305	0.000 ***	0.107	0.042 **
LeuzInv	+	Decrease	-0.474	0.000 ***	-0.249	0.000 ***	-0.051	0.136	0.089	0.009 ***
ChangeAud	+/-	Decrease/Increase	0.140	0.005 ***	0.154	0.001 ***	0.081	0.044 **	0.028	0.471
DummyAud*LeuzInv	+	Decrease	-0.157	0.015 **	-0.231	0.000 ***	-0.198	0.000 ***	-0.018	0.724
DummyAud*ChangeAud	+	Decrease	-0.196	0.038 **	-0.204	0.022 **	-0.044	0.601	0.030	0.714
DummyAud*ChangeAud*LeuzInv	+	Decrease	-0.135	0.356	0.030	0.817	0.012	0.920	0.059	0.609
Tunure	nil	No change	-0.041	0.000 ***	-0.021	0.000 ***	-0.001	0.721	0.014	0.000 ***
DummyAud*Tenure	+	Decrease	0.022	0.021 **	0.018	0.035 **	0.014	0.058 *	0.000	0.959
ROA	n/a	n/a	0.000	0.170	0.000	0.301	0.000	0.733	0.001	0.006 **
DtoE	n/a	n/a	0.000	0.546	0.000	0.573	0.000	0.495	0.000	0.446
natTA	n/a	n/a	0.049	0.000 ***	0.050	0.000 ***	0.044	0.000 ***	0.039	0.000 ***
Constant			-1.962	0.000 ***	-1.884	0.000 ***	-1.447	0.000 ***	-1.010	0.000 ***
LR statistics			873.830		503.95		215.45		275.63	
Log likelihood			-7,968.221		-9,735.372		-12,716.411		-14,152.736	
Pseudo R2			0.045		0.028		0.012		0.005	

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Table 14: Results of Robustness Test (n=20,757) (continued)

AudQua	expected sign	Trend	Audit accepted levels of discretionary accruals									
			7.5%		10.0%		15.0%		20.0%		30.0%	
			Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
DummyAud	+	Decrease	-0.103	0.060 *	-0.217	0.000 ***	-0.412	0.000 ***	-0.493	0.000 ***	-0.493	0.000 ***
LeuzInv	+	Decrease	0.183	0.000 ***	0.292	0.000 ***	0.399	0.000 ***	0.587	0.000 ***	0.587	0.000 ***
ChangeAud	+/-	Decrease/Increase	-0.008	0.837	0.024	0.561	-0.070	0.122	-0.087	0.081 *	-0.087	0.081 *
DummyAud*LeuzInv	+	Decrease	0.085	0.113	0.172	0.002 ***	0.319	0.000 ***	0.320	0.000 ***	0.320	0.000 ***
DummyAud*ChangeAud	+	Decrease	0.149	0.079 *	0.129	0.138	0.174	0.057 *	0.144	0.130	0.144	0.130
DummyAud*ChangeAud*LeuzInv	+	Decrease	-0.034	0.777	-0.061	0.624	-0.074	0.589	0.063	0.674	0.063	0.674
Tunure	nil	No change	0.019	0.000 ***	0.025	0.000 ***	0.034	0.000 ***	0.044	0.000 ***	0.044	0.000 ***
DummyAud*Tenure	+	Decrease	0.007	0.365	-0.004	0.663	-0.019	0.039 **	-0.037	0.000 ***	-0.037	0.000 ***
ROA	n/a	n/a	0.002	0.000 ***	0.003	0.000 ***	0.004	0.000 ***	0.000	0.001 ***	0.000	0.001 ***
DtoE	n/a	n/a	0.000	0.324	0.000	0.316	0.000	0.253	0.000	0.272	0.000	0.272
natTA	n/a	n/a	0.034	0.000 ***	0.032	0.000 ***	0.012	0.109	0.009	0.279	0.009	0.279
Constant			-0.625	0.000 ***	-0.392	0.008 **	0.369	0.034 *	0.599	0.002 ***	0.599	0.002 ***
LR statistics			449.43		636.93		875.77		1106.93		1106.93	
Log likelihood			-13,516.433		-12,292.739		-9,839.462		-8,255.401		-8,255.401	
Pseudo R2			0.005		0.009		0.022		0.032		0.032	

Table 14: Results of Robustness Test (n=20,757) (continued)

Note: The model is $\Pr(AudQua)_{it} = \alpha + \beta_1 DummyAud_{it} + \beta_2 LeuzInv_p + \beta_3 ChangeAud_{it} + \beta_4 DummyAud_{it} * LeuzInv_p + \beta_5 DummyAud_{it} * ChangeAud_{it} + \beta_6 DummyAud_{it} * ChangeAud_{it} * LeuzInv_p + \beta_7 Tenure_{it} + \beta_8 DummyAud_{it} * Tenure_{it} + \beta_9 ROA_{it} + \beta_{10} DtoE_{it} + \beta_{11} natTA_{it} + v_{it}$; where

$AudQua_{it}$	=	audit quality for firm i in year t;
$DummyAud_{it}$	=	a dummy variable that is equal to 1 if firm i was audited by a big firm in year t and 0 otherwise;
$LeuzInv_p$	=	Leuz et al.'s (2003) level of investor protection for country p;
$Tenure_{it}$	=	the number of consecutive years for which audit firms within the same type were employed as the listed company's auditor for firm i at year t;
$ChangeAud_{it}$	=	a dummy variable which is equal to 1 if firm i in year t switches audit firm type, 0 otherwise;
ROA_{it}	=	return on assets for firm i in year t which is the Compustat item ROA or is computed as $[net\ income_{it}\ (IB)/total\ assets\ _{it}(AT)]\ x100$;
$DtoE_{it}$	=	debt to equity ratio which is computed as $[long - term\ deb\ _{it}(DLTT) + current\ portion\ of\ long - term\ debt\ _{it}(DD1)] / total\ stockholders'\ equity_{it}\ (SEQ)$;
$natTA_{it}$	=	a natural logarithm of total assets (USD) for firm i in year t;
v_{it}	=	unspecific random effects for firm i in year t;
i	=	1,…,I firm index;
p	=	Indonesia, Malaysia, the Philippines, Thailand or Singapore; and
t	=	1,…,T_i, year index.

*, **, and *** indicate significant level of coefficient at 0.10, 0.05, and 0.01, one-tailed test for predicted sign , all others are two-tailed test, respectively.

Pseudo R^2 is computed as $(Log\ Likelihood\ value\ of\ the\ constant - only\ model - Log\ Likelihood\ value\ of\ the\ model)/Log\ Likelihood\ value\ of\ the\ constant$. (Gould, 2001)

The findings from the robustness test are as follows.

1. The results of the test on $DummyAud$ here are consistent with the results of the test on $AudRank$. The coefficient of $DummyAud$ decreases when the benchmark increases by one level. It continually drops from +0.568 at the benchmark 0.5% to -0.493 at the benchmark 30%. This indicates that increasing the benchmark lowers a big firm's probability of issuing an unqualified audit report for a client with a high level of discretionary accruals. This means that big firms are less tolerant of a high level of discretionary accruals than non-big firms. This finding strengthens the previous result in Section 7.2.3.1 that big firms have a higher probability of being defined as high audit quality providers because they are less tolerant of discretionary accruals.

2. The observation of $LeuzInv$ in this robustness test provides a result that is similar to the test of $InvPro$ in Section 7.2.3.2. The coefficient of $LeuzInv$ is -0.474 at the benchmark 0.5%, continually increasing up to +0.587 at the benchmark 30%. This indicates that the probability that audit firms from Malaysia and Singapore would be defined as a high quality audit provider increases in line with the increase in the benchmark. This means that, in comparison to audit firms from Thailand, Indonesia and the Philippines, those from Malaysia and Singapore are found to be more tolerant of discretionary accruals.

3. The robustness test here provides slightly different results for $ChangeAud$ from Section 7.2.3.3. The coefficients of $ChangeAud$ here are significant with a positive sign at the benchmarks 0.5%, 1% and 2.5% and with a negative sign at the benchmarks 20% and 30%. Sections 7.2.3.3 reported that the coefficients of $ChangeAud$ are only significant with a positive sign at the benchmarks 0.5%, 1% and 2.5%. Nonetheless the results here still indicate that switching audit firm type can capture the difference in audit quality between types of audit big/non-big firm and that switching audit firm type may promote audit quality if successor audit firms have a lower level of audit materiality in their first year audits after switching audit firm.

4. The coefficients of $DummyAud * LeuzInv$ are significant with a negative sign at the benchmarks of 0.5%, 1% and 2.5% but with a positive sign at benchmarks above 7.5%. This affirms that a big firm in a high level of investor protection country would be more tolerant of a high level of discretionary accruals than a big firm in a low level of investor protection country. A big firm in a high level of investor protection country may not modify its clean opinion even when its clients have a high level of discretionary accruals. This implies that, by considering only the influence of investor protection on audit quality at a national level, a big firm in a high level of investor protection country may be more flexible than a big firm in a low level of investor protection country.

5. The tests of $ChangeAud$ in Section 7.2.3.3 and in this section found that switching of an audit between audit firm type captures the difference in audit quality between a big firm and a non-big firm and may improve audit quality. In addition, the tests of $AudRank$ in Section 7.2.3.1 and $DummyAud$ in this section indicate that a big firm has higher audit quality than a non-big firm. Therefore, changing from a non-big firm to a big firm is expected to promote audit quality. This expectation is observed by $DummyAud * ChangeAud$. The coefficients of $DummyAud * ChangeAud$ are significant with a negative sign at the benchmarks 0.5% and 1% but a positive sign at the benchmarks 7.5% and 15%. This provide some evidence that, in comparison to a change from a big firm to a non-big firm, a change from a non-big firm to a big firm reduces the probability that a big firm would issue a clean audit report with a high level of discretionary accruals at the benchmarks of 0.5% and 1%. This indicates that a big firm may be more tolerant of discretionary accruals after a change from a non-big firm to a big firm. This means that a non-big firm is more conservative in the first year audit after their audited clients switched from a big firm to a non-big firm.

6. Test of $DummyAud * ChangeAud * LeuzInv$ aims to capture the difference in audit quality after switching audit firm from a non-big firm to a big firm but in different levels of investor protection. However, we cannot capture this difference.

7. Similarly to the results of $Tenure$ in Section 7.2.3.3, the coefficients of $Tenure$ in the robustness test are significant with a negative sign at the benchmarks below

2.5% but with a positive sign at the benchmarks above 2.5%. The coefficient slightly increases when the benchmark increases. This indicates that an increase in audit firm type tenure increases the probability that audit firms would allow their clients to report a high level of discretionary accruals.

8. Long audit tenure with a big firm is presumed to impair audit quality less since a big firm is of higher audit quality than a non-big firm. The test of $DummyAud * Tenure$ supports this presumption. The coefficients of $DummyAud * Tenure$ are found to be significant with a positive sign at the benchmarks 0.5%, 1% and 2.5% but a negative sign at the benchmarks 20% and 30%. This indicates that long audit firm tenure with a big firm reduces the probability that a big firm would be more tolerant of discretionary accruals. This supports the findings of $DummyAud$ and $AudRank$ that a big firm is of higher audit quality than a non-big firm.

9. The results of $DtoE$ and ROA here are similar to those in Section 7.2.3.4. $DtoE$ does not significantly affect audit quality at all levels of benchmark whilst ROA is significant at benchmarks above 5%. This affirms that audit quality is influenced by firm performance, not firm leverage. Audit firms (either big or non-big firms) may be more tolerant of high performance firms' discretionary accruals.

The robustness test reports that, at all levels of benchmark, $natTA$ has a significant positive influence on the probability that audit firms would issue an unqualified audit report to audited companies with a high level of discretionary accruals. However, Section 7.2.3.4 found that the coefficients of $natTA$ are significant, with a positive sign at benchmarks above 0.5%. Although there is a slight difference in the results of $natTA$ between the robustness test and the test in Section 7.2.3.4, the positive influence of firm size on audit quality found by these two tests implies that it may be easier for larger firms to receive an unqualified audit report than small firms when they report a high level of discretionary accruals.

The results of the robustness test are similar to those in Section 7.2. The test here also provides further evidence that, in comparison to a big firm from Thailand, Indonesia and the Philippines, a big firm from Singapore and Malaysia may be able to tolerate a higher level of discretionary accruals. However, non-big firms from these five countries are less

tolerant of discretionary accruals in the first year audit after switching of an audit from a big firm to a non-big firm. This implies that switching of an audit from a big firm to a non-big firm leads a non-big firm to be more conservative in the first year audit after switching. The robustness test of the influence on a country's level of investor protection also strengthens the finding of Section 7.2 that there should be other national level factors in influencing audit quality. As a big firm is found to have higher audit quality than a non-big firm, audit firm tenure with a big firm impairs audit quality less than audit firm tenure with a non-big firm.

7.4 CONCLUSION

This chapter reports the results of testing influence of audit firm type and investor protection on audit quality. This is done by using probit models to compute the probability that audit firms would be tolerant of discretionary accruals without modification of their unqualified audit opinion. Artificial audit materiality is set up in order to use to test the audit firms' tolerance to their audited companies' earnings management through discretionary accruals. The artificial audit materiality run from 0.5% through 1%, 2.5%, 5%, 7.5%, 10%, 15%, 20% to 30% of lagged total assets. The more the audit firms can tolerate their clients' discretionary accruals, the less the audit quality they provide.

The results of the test support the general perception that big firms are of higher audit quality than non-big firms. Maintaining auditor reputation and avoiding the serious consequences of an audit failure may drive big firms to be less tolerant of earnings management than non-big firms. Interestingly, even though Malaysia and Singapore seem to have strong level of investor protection, audit firms from these two countries are more tolerant of discretionary accruals than those from Indonesia, the Philippines and Thailand, which have weak investor protection. This indicates that there may be other national factors in influencing audit quality.

From testing the impact of a country's investor protection on audit quality measured by an audit firm's tolerance to their clients' discretionary accruals, our five selected countries can be clustered into three groups. Indonesia, the Philippines and Thailand are more conservative than Malaysia and Singapore because they are less tolerant of earnings management. Malaysia is the most flexible because it is most tolerant of earnings management. Singapore is in the middle of these two groups. The author also raises doubt

that firm and engagement level factors may outperform national level factors in promoting audit quality. Importantly, firm and engagement level factors may lead audit quality to vary from firm to firm and even from engagement to engagement.

The major limitations of the study in this chapter are as follows. First, similarly to Becker et al. (1998) and Maijoor and Vanstraelen (2006), due to the fact that the author used company/year level data, pseudo R^2 of the probit model is low. A low pseudo R^2 of the probit model may be criticised as a low reliability of the probit model. Second, the percentage of discretionary accruals divided by lagged total assets is used as benchmark to evaluate audit quality. As previously discussed, setting audit materiality is a subjective concept that requires auditors' professional judgement. In practice, the materiality level varies from individual auditor to individual auditor even though they may be in the same audit firm. Third, the cross-sectional Jones Model is used to predict discretionary accruals. As Section 7.2.1.3 found that our observations with clean audit reports had predicted discretionary accruals at 2.5%-5% of lagged total assets, our inferences are impaired if the model can capture discretionary accruals only at 2.5%-5% of lagged total assets.

The next chapter will extend the results of this chapter by looking at the qualitative evidence on earnings management and audit quality. It will explore the perspectives of some key stakeholders of audits on earnings management and audit quality. Especially, it will identify national, firm and engagement level factors that are seen by professionals as influencing audit quality.

CHAPTER 8

QUALITATIVE EVIDENCE ON EARNINGS MANAGEMENT AND AUDIT QUALITY

8.1 INTRODUCTION

In this chapter, qualitative evidence on earnings management and audit quality will be provided. 16 semi-structured interviews with some of the key stakeholders of audits have been conducted. Six of the 16 interviews are from Malaysia. Seven interviews are from Thailand and three interviews are from Singapore. Three of the 16 interviews were of representatives from the professional regulators in all three countries. One of the 16 interviews was a representative from the securities regulator in Thailand. Five of the 16 interviews are from the mid-tier audit firms, two from Thailand and three from Malaysia. One of the 16 interviews is from an academic from Singapore. Three of the 16 interviews were of representatives from listed companies, two from Thailand and one from Malaysia. One of the 16 interviews is from a non-listed company in Thailand.

The results of the interviews are presented as follows. Sections 8.2 and 8.3 report the results of how the interviewees define and measure audit quality. Section 8.4 shows factors in leading a good audit quality at a firm level and a national level that were identified by the interviewees. Section 8.5 explores the interviewees' views on the general belief that big firms are of higher quality than non-big firms. Section 8.6 reveals the interviewees' opinions on the impact of long audit tenure on audit quality and the interviewees' views on the policy on audit firm/partner rotation. Section 8.7 gives the interviewees' perspectives on earnings management. Section 8.8 provides the summary of this chapter.

8.2 WHAT IS AUDIT QUALITY?

Chapter 4 documented the definition of audit quality provided by previous literature. Lu (2006), Gaver and Perterson (2007), Gul et al. (2009) and Yu (2011) defined audit quality as an auditor's ability to detect a misstatement. Gul et al. (2009) added that management also plays a prominent role in promoting audit quality by helping an auditor to correct a

misstatement found during an audit. Yu (2011) also believed that audit quality occurs when an auditor reports the fact of what was found. These seem narrow definitions of audit quality that are only from the investors' point of views, focusing only on an auditor's ability to detect a misstatement.

Qualitative evidence here supports the finding that the definition of audit quality seems to be unclear. Three of the six interviewees from Malaysia and one of the seven interviewees from Thailand accepted that it is not well defined. Their statements were for example:

> *"there is no fixed or common definition of audit* quality" (The interviewee from the professional regulator in Malaysia);

> *"we don't have clear definition"* (The interviewee from mid-tier audit firm XXA in Malaysia); and

> *"the term audit quality is very difficult to be defined"* (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ).

All three interviewees from Singapore could provide definitions of audit quality. Although those from Singapore and the Stock Exchange of Thailand seem to have more understanding of this term, they gave different perspectives on audit quality. The interviewees' definitions of audit quality can be grouped as definitions that are associated with outputs of an audit, the process of an audit and client satisfaction. These definitions are discussed as follows.

8.2.1 OUTPUTS OF AN AUDIT

An audit is an unobservable and confidential process; therefore, its quality cannot be easily assessed by the public. What the public knows about audit quality is its outputs. These outputs are an audit report, a set of financial statements and value added benefits from audits.

The audit report is the only output of an audit that can be accessed by the public. The interviewee from the independent audit regulator in Thailand and the interviewee from the professional regulator in Thailand believed that a high quality audit must provide a reliable audit report. They gave the views that:

> *"Even though an auditor runs a good process of an audit, audit quality can be impaired if he or she issues an unqualified audit report even when financial statements have a material misstatement"* (The interviewee from the securities audit regulator in Thailand) and

> *"A good quality of audit occurs when the auditor's opinion provides the fact of what happened"* (The interviewee from the professional regulator in Thailand).

However, according to the view of the interviewee from the professional regulator in Malaysia, a high quality audit also means to audit firm's reputation for a high quality audit provider. He expressed that:

> *"...in general, it's very much about the accountability of the financial statements and the credibility of financial statements. That's what we call audit quality. And of course then your, like I said, your reputation of your firm, will come into play and also a good set of financial statements, I think...fair to say that a good set of financial statements with audit quality should give confidence to the reader. When the reader picks up, I would say, okay, this is a big company and is audited by a large audit firm: I have confidence in the information disclosed. That is audit quality. If I pick up financial statements of one company, I don't know what company it is. I am not sure who is the auditor. Then I have doubts. Then that is no audit quality...."* (The interviewee from the professional regulator in Malaysia).

Senior managements of accounting and/or finance departments from one listed company in Malaysia and two listed companies in Thailand perceived that audit quality occurs when their companies can gain value added benefits from audits, for example the review of their internal processes and the knowledge shared by the auditors. Their perspectives were that audit quality was high in the following instances:

> *"the auditor has to thoroughly check and review company's internal process in order to assess whether existing process is effective and efficient and whether there is a need for improvement"* (The interviewee from one listed company in Malaysia, which employed big 4 audit firm XXV);

> *"we can derive benefits from its researches and pool of knowledge during audits. In addition, in case we face new accounting issues, the firm actively provides consultation with us"* (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ); and

> *"although we have our own clear policies and procedures, we cannot completely monitor all of our operation. Then I think we expect that the external auditors should be*

one function that helps us do this. The auditors should report to us strengths and weaknesses of our operation, which they have found during the audits" (The interviewee from one listed company in Thailand, which employed a local audit firm).

The member of senior management from one listed company in Malaysia, which employed one of the big 4 audit firms, and the member of senior management from one listed company in Thailand, which also employed one of the big 4 audit firms, were also concerned with the reliability of audit report issued. They believed that a quality of audit report links to audit quality directly and their statements were:

> *"An audit report has to indicate the extent to which the company's financial statements give a true and fair view of the company's financial position and performance in accordance with GAAP. This guarantees investors the reliability of the company's financial information"* (The interviewee from one listed company in Malaysia, which employed big 4 audit firm XXV) and

> *"We attach importance to auditor's report to the company's shareholders for his/her opinion on whether the company's financial statements are presented fairly, in all material respects, in accordance with generally accepted accounting principles. If we talk about audit quality, we should focus on this. Basically, we are concerned with significant matters emphasised in the auditor's report"* (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ).

Outputs of the audit are generally used by the interviewees to define the term *audit quality*. However they show different views. The interviewees from the regulators in Thailand define audit quality as an audit that provides a reliable audit report whilst the interviewee from the regulator in Malaysia sees that a high quality audit is meant by the credibility of the audited financial statements. The interviewees from the listed companies believe that audit quality equates to value added benefits which they can derive from audits and a reliable audit report.

8.2.2 THE PROCESS OF AN AUDIT

The views of the regulators, the audit firms and the academic on audit quality indicate the importance of the process of an audit. To achieve audit quality, they believed that an audit must be executed in compliance with generally accepted auditing standards.

The interviewee from the securities audit regulator in Thailand and the interviewee from the independent audit regulator in Singapore deem that audit quality is an audit conducted in accordance with the auditing standards. They opined that:

> *"From the audit regulator's point of view, we believe that audit quality can be seen as the combination between a process of an audit and its output. We do not consider audit quality to be solely from the output of an audit or from types of audit firms. We think audit quality should be considered from an entire system of an audit at engagement and firm levels. It can be seen as whether the system at both levels complies with the standards issued by IFAC or accounting profession regulator..."* (The interviewee from the securities audit regulator in Thailand) and

> *"I think audit quality's basic baseline is that when they do the audit they comply with the auditing standards"* (The interviewee from the independent audit regulator in Singapore).

Similarly to the regulators, the audit partner from one of the big 4 audit firms in Malaysia, the audit partner from one local audit firm in Thailand and the audit partner from one mid-tier audit firm in Malaysia defined audit quality as, for example:

> *"Well, audit quality, in my personal opinion really is to carry audit in accordance with the auditing standards"* (The audit partner from big 4 audit firm XXX in Malaysia) and

> *"Our firm's audit quality is the use of our auditing profession in accordance with the profession's principle to perform audits"* (The audit partner from one local audit firm in Thailand).

The academic from Singapore reaffirmed that audit quality is to execute an audit in compliance with the auditing standards and to report a fact found by an auditor which needs further actions. He stated that:

> *"I am talking about if I perform the audit according to the auditing standards and I find something that I need to bring to the attention of the audit committee or to the management. I ought to be able to do that. So I define that as audit quality"* (The academic from Singapore).

The interviewees from the regulator in Thailand and Singapore, the audit partners from Thailand and Malaysia, and the academic from Singapore also define audit quality as an audit process that complies with the applicable auditing standards.

8.2.3 CLIENT SATISFACTION

Achieving an audited company's satisfaction is also defined as a good audit quality. The reappointment of the current auditor in the next year's audit is perceived to be evidence that audit firms meet their client satisfactions. In doing so, audit firms have their own assessments of whether they provide client satisfaction. The assessments can be done in forms of formal surveys and/or informal interviews. For some multinational audit firms, the assessments are sometimes conducted by the global head offices. The interviewees from audit firms explained that:

> *"All complaints about an audit can go directly to an audit partner or email to the office"* (The audit partner from mid-tier audit firm XXC in Malaysia);

> *"to make sure that we meet the clients' expectations and also on an annual basis we have a survey of our clients, what we call a client satisfaction survey where key clients are selected and these surveys for information are done independently of the Malaysian office, it's done by our Southeast Asia office"* (The audit partner from big 4 audit firm XXX in Malaysia); and

> *"We have a survey for certain. We call them targeted clients. I mean that for those bigger and very important clients, then we have a survey. We also have an independent team, someone from management, to go there and interview the client without the presence of engagement team to do that. Sometimes we have people from the UK, the US, to come"* (The audit partner from big 4 audit firm XXY in Singapore).

Listed companies also have the assessment of auditor's performance that helps them make the decision as to whether they will reappoint the incumbent auditors. The interviewees from listed companies provided the fact that:

> *"We carry out a Group Company survey among CFOs and our staff who deal with the audit team. The survey covers what audit team's contribution and knowledge we derive from an audit. Although we have a bid for audit engagement infrequently, we still need to conduct an annual survey of the incumbent auditor's performance. In case we found that audit quality or an audit provided by incumbent audit firm does not meet our expectation, we would propose changing the audit firm before the plan"* (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ) and

> *"According to our procedure, before we select an audit firm and ask for the approval of the audit committee, we have to score the performance of our auditor in order to show*

the reason why we continue with the existing audit firm" (The interviewee from one listed company in Thailand, which employed a local audit firm).

Audit firms and audited companies also define audit quality as an audit that meets the audited companies' satisfaction. Client satisfaction also seems to influence the reappointment of the audit firms.

8.2.4 DISCUSSION

From the results of interviews as discussed earlier, the model of audit quality could be developed as shown in figure 9 below.

Figure 9 Model of Audit Quality
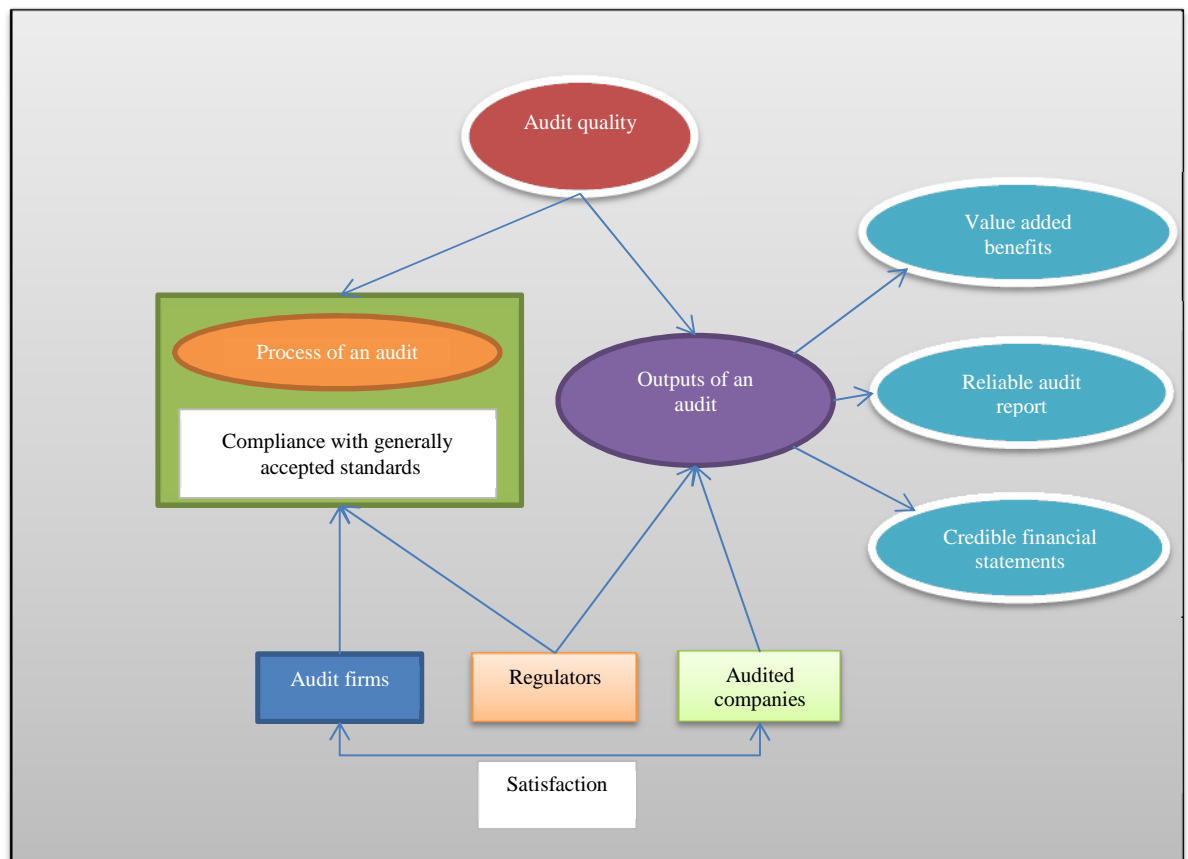
Audit firms, regulators and audited companies see audit quality differently. However, the definitions of audit quality do not vary according to nationality. Audit firms see audit quality as an audit process that complies with generally accepted auditing standards; meanwhile, audited entities define audit quality as their satisfaction of what they derive from an audit. Regulators are concerned with both the process of an audit and its outputs.

Chapter 4 defined audit quality based on definitions of previous studies (e.g. Lu (2006), Gaver and Perterson (2007), Gul et al. (2009) and Yu (2011)). It summarised that audit quality is a result of an effective process and a satisfactory outcome. The results of interviews in this chapter broaden this definition. From the interviews, it can be deduced that a good audit quality is an audit process that complies with generally accepted auditing standards and helps an auditor deliver value added benefits to an audited entity. It also provides the public with a reliable audit report and a credible set of financial statements that presents an audited company's financial position and performance. Owing to being a subjective concept and difficult to define, audit quality is difficult to be measured and evaluated.

8.3. HOW TO MEASURE AUDIT QUALITY?

As long as there is no clear definition of audit quality, its measurement is still open to question. Chapter 4 discussed the quantitative measures of audit quality used by empirical studies, for example discretionary accruals (e.g., Jeong and Rho, 2004; Carey and Simnett, 2006; Maijoor and Vanstraelen, 2006; Piot and Janin, 2007; and Reichelt and Wang, 2010), the incidence of issuing going-concern auditor reports (Carey and Simnett, 2006; Reichelt and Wang, 2010), the audited client's propensity to report earnings that meet a benchmark (Carey and Simnett, 2006), the results of independent parties' inspections of audit firms (Hilary and Lennox, 2005) and the restatement of prior year financial statements (Kinney, Palmrose and Scholz, 2004). This chapter contributes to the qualitative measures of audit quality. The interviewees' qualitative measures of audit quality are the quality of an audit team, an audit firm's technical team and global network, applicable auditing standards, an audit firm's organisational structure and management and quality control system, inspections of an audit firm, management letter, error and/or misstatement found from the audited financial statements, lawsuits against an audit firm, reputation for a high credible audit firm and satisfaction. Each measure of audit quality is discussed as follows.

8.3.1 MEASURES OF AN AUDIT PROCESS

An audit is an unobservable process, but the assessment of it is deemed to be the key measure of audit quality identified by the interviewees. The assessment is made through the following ways.

8.3.1.1 THE ASSESSMENT OF ENGAGEMENET PERFORMANCE

Participants used the quality of an audit team and the degree to which audit work complies with auditing standards to assess the quality of audit engagement.

- Audit team: an audit is a professional service; therefore, the interviewees from the audited entities in Thailand use the quality of the audit team as a key measure of audit process. They believed that the quality of the audit team can be measured by its members' knowledge about/ expertise in understanding the audited company's business. Their views were that:

   *"We focus on the staff of the audit firm. I think it is very important." (*The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ) and

   "The quality of audit is about the quality of the audit team. Many audit firms use new staff for an audit engagement. The point about using new staff is not unusual because an audit is like the process of gathering information but to make the judgement or decision, in charge of an audit team or a team leader needs to work hard before performing audit"
   (The interviewee from one listed company in Thailand, which employed a local audit firm).

   Timing is a key indicator that is used to access the quality of audit team by the interviewee from the listed company in Thailand and the audit partner from one of mid-tier audit firm in Malaysia. They added that:

   "The quality of audit is about the timing because we have the regulation on time frame for when the companies' audits have to be completed and how many days the completion should be done before the audited financial statements would be reviewed by the board of directors." (The interviewee from one listed company in Thailand, which employed a local audit firm)*;* and

"In order to do this audit process we have multiple inputs to arrive at the process itself. I would look therefore at what kind of staff do we have involved, how many staff or what is the ratio of staff to partner in that particular engagement. The other one then would be in relation to the number of hours. So obviously the more hours you spend, our likelihood of having a better audit quality will come in." (The interviewee from the principal and development team of mid-tier audit firm XXA in Malaysia).

- Auditing standards: in the previous section, the interviewees from audit firms in Malaysia and the interviewee from the professional regulator in Thailand had defined audit quality as an audit that complies with the auditing standards. They then used the extent to which an audit is performed in accordance with applicable auditing standards as one measure of audit quality. They expressed their opinions that:

"To measure audit quality is basically to us very straightforward in compliance with the auditing standards and the accounting standards" (The audit partner from mid-tier audit firm XXB in Malaysia);

"...a lot of auditing standards, actually it depends on how you understand the requirement of the standards and from your understanding, you implement it. So in short, what it means is that we need to truly understand the spirit of the auditing standards and apply it in good faith...it means that the audit should comply with the auditing standards" (The audit partner from big 4 audit firm XXX in Malaysia); and

"Each audit working paper must be designed as the audit standards require. It should document how risks are identified, how auditors design audit works that respond to those risks, how audit materiality is set, what the conclusions of audit works are, who draws the conclusion, who performs the review and who provides the final concurrences." (The interviewee from the professional regulator in Thailand).

To measure the quality of the audit process through the assessment of engagement performance, audited entities use the individuals' talent and ability and the time frame for completion of an audit. On the other hand, audit firms and regulators use the applicable auditing standards as the benchmark for quality of the audit process. However, assessing the quality of an audit team and audit work seems to be difficult for the public in general unless the audit process is allowed to be observed. Importantly, the measures of the quality of an audit team and an audit work are subjective.

8.3.1.2 THE EFFECTIVENESS OF AUDIT FIRMS' MANAGEMENT AND STRUCTURE

A good audit process is also perceived to result from the audit firm's effective management and structure, especially how an audit firm manages its staff. According to the interviewee from the professional regulator in Thailand, the measure of audit quality can be reflected in terms of good management of staff planning and a good procedure for evaluating staff performance. He believed that:

> *"To measure the management of audits, we should look at the organisational structure...To measure staff recruitment policy, we should check whether there is the requirement for applicants' levels of education, specific qualifications and universities, including the job application tests. In addition there should be a policy on staff training and a record of training attendance. To investigate the process of client continuance and acceptance, we need to inspect documentation of what the process is and what the conclusions are."* (The interviewee from the professional regulator in Thailand).

Moreover, quality control system is seen to be an effective mechanism for improving a quality of audit process. In the view of the audit partner from one mid-tier audit firm in Thailand, the existence of a quality control review can be the indicator that an audit firm has an effective quality control system. She stated that:

> *"We have two levels of quality control procedures. First, for the Thai office, clients that we identify as high-risk clients or clients whose financial statements are widely used by many stakeholders are required to have a quality control review before issuing an audit opinion... Second, as we are members of an international audit firm, our head office comes to review our audit engagements. This is to make sure that all members have the same standards as required by head office."* (The audit partner from mid-tier audit firm XXC in Thailand).

Furthermore, an audit firm's technical department and global network is also found to help it have a good quality of audit process. The interviewee from one audited company in Thailand, which employed one of the big 4 auditors therefore uses the firm's technical team and worldwide network as the measure of its audit service. He underscored that:

> *"We focus on the staff of the audit firm. I think it is very important. Sometimes an auditor from a big firm has a good technical team. We believe in their staff, knowledge,*

technical team and network." (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ).

From the interviews, it appears that a quality of audit process is also associated with the effectiveness of an audit firm's management and structure, especially the management and structure of how the audit firm manages and controls its staff and audit engagements. However, similarly to the assessment of an audit team's quality and audit work's quality, the quality of an audit firm's management and structure is invisible and subjective so that it can be difficult to assess an audit firm's management and structure.

8.3.1.3 AUDIT FIRM INSPECTION

Assessment of the audit process through the evaluation of engagement performance and the audit firm's management and structure is sometimes carried out by a regulator's inspection of an audit firm. The interviewees from the independent audit regulators strongly believed that their inspection of audit firms is deemed to be a good measure of audit quality. Their opinions were that:

> *"I think many countries have this, including Thailand, measurement of audit quality. One indicator could be compliance with auditing standards and that's what independent audit oversight regulators are doing around the world. There are at least, to my knowledge, 46 regulators around the world, belonging to this group call "IFIAR", International Forum of Independent Audit Regulators, and within this body all of us measure audit quality vis-à-vis compliance with the auditing standards."* (The interviewee from the independent audit regulator in Singapore) and

> *"We have the inspection activities of registrant audit firms and their individual audit engagements. To do so, we have a rating system for audit quality, which indicates the level of deficiency in the audit quality control system and the need for improvements in their quality. The inspection is to investigate the extent to which audit firms comply with required standards. The initial consideration is whether audit firms have policies or procedures that cover all processes required by the standards and whether they follow those policies or procedures."* (The interviewee from the securities audit regulator in Thailand).

Audit firms themselves also agree that the establishment of an independent audit regulator could help promote audit quality. The audit partner from one mid-tier audit firm in

Malaysia shared his view that the audit firm inspection raises his firm's awareness of the quality of audit process. He stated that:

> *"I would say one of the things we see right now in Malaysia is audit inspections. We do have the Audit Oversight Board, AOB that comes in for a XXA (Name of the audit firm), it's every year to actually do the inspection of our files. So they don't come from the perspective of the output, they come from perspective of the process. So they go through, they inspect our files in very detail just to identify whether we followed a rigorous process of assessing our audit evidence."* (The interviewee from the principal and development team of mid-tier audit firm XXA in Malaysia).

According to the perspective of the regulator and the audit firm, audit firm inspection seems to be the best measure of quality of audit process since it is conducted by independent regulator. In addition, the assessment of audit quality is performed at audit engagement and firm levels.

8.3.2 MEASURES OF OUTPUTS

Measuring audit quality through an audit process is impossible for the public since the assessment of an audit process is allowed only by regulators. Therefore, measuring audit quality through outputs of an audit is an easier way for the public to measure quality but it may be less effective, especially measuring audit quality by the audit report. The academic from Singapore pointed out that:

> *"I think audit quality unfortunately, if we try to measure, only by the output...the auditor's opinion...that one... that is useless because in the audit's opinion there is only particular... only about 2 or 3 types, a qualified, unqualified and all unqualified audit reports look exactly the same...because it's determined by the auditing standards. So under those circumstances...actually...they only say they pass...but it doesn't tell us the high pass, the low pass, the good pass and the bad pass...then of course those that don't pass they tell you something about why they don't pass...that means the qualified audit report."* (The academic from Singapore).

Thus, a management letter is an alternative output of an audit that can measure audit quality. However, unlike the audit report, the public cannot see this. The academic from Singapore and the interviewee from one listed company in Malaysia, which employed one of the big 4 audit firms, believed that the one possibly effective thing we can measure audit

quality by is to make management letters available to the public. They expressed the views that:

> *"unfortunately unless outsiders are able to access the management letters, the management letters is the other part that has a lot of information...by concerning what were the concerns raised by the auditors and how did the management basically address those concerns and in fact in most of the management letters any audit concerns are always classified as high, medium and low in terms of the relative importance or relative of how critical they are"* (The academic from Singapore) and

> *"the auditor's performance can be measured by the auditor's management letter, which identifies any weakness of the internal control system and also guides the company through a way for improvement. Our company also uses this ML to evaluate yearly CFOs' performance among group of companies"* (The interviewee from one listed company in Malaysia, which employed big 4 audit firm XXV).

Contrary to the interviewee from one listed company in Malaysia, which employed one of big 4 audit firms, the interviewee from one listed company in Thailand, which also employed one of big 4 audit firms, paid less attention to the auditor's management letter. He contended that:

> *"Weakness in our company's internal control system found by the auditor during his/her assessment of our internal process I think is value-added output. It is not a key objective we need. The auditor conducts the assessment in order to test the reasonableness of our control system. Some results are therefore the improvement that the auditor proposes but not the objective that we need. I think the auditor's assessment of the internal control system is to test our process but not to solely identify weakness in our system...if we really need to test our system, I think it is better to have special audit."* (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ).

Misreporting, error and/or misstatement found after the audited financial statements were published may be the indicators of an audit failure. Therefore, lawsuits against an audit firm that arise from this misreporting, error and/or misstatement are also measures of audit quality identified by two interviewees from two audit firms in Malaysia. Their statements were:

> *"If we look again from the perspective of the output itself, audit opinion, auditor's report, then clearly the fact that we don't get sued is going to be a very good measure of the audit quality itself"* (The interviewee from the principal and development team of mid-tier audit firm XXA in Malaysia) and

"one of the very basic ways to see that after financial statements have been audited, you do not find any significant misstatements, that was left undetected by the audit" (The audit partner from big 4 audit firm XXX in Malaysia).

Acquiring auditor reputation seems to be the ultimate goal of audit firms. It is believed that auditor reputation will lead to the public's good perception of the audit firms. The partner from one of big 4 audit firms in Singapore highlighted that gaining reputation for a high credible audit provider can be a good measure of audit quality. His view was:

"We'll probably can't measure audit quality. But you can actually gauge based on feedback, the views of the commercial public. If a firm, for example, firm who sign off on the audit report and if the general public says "Okay" when this firm sign off on report, generally they feel comfortable in relying on the financial statements. I think we achieve the audit quality." (The audit partner from big 4 audit firm XXY in Singapore).

Specific output of the audit that is used as an effective measure of audit quality remains unclear. There is evidence that the audit report is not an effective measure of audit quality because of its standardised patterns. These standardised patterns generally provide the public limited information on the audit and its findings. In addition, there is the perception that if the public can access to the auditor's management letter, it may be a good measure of audit quality. However, the contradictory view contends that the auditor's management letter is just value added output of the audit not the key objective of the audit. There is also the belief that lawsuits accusing audit firms of the audit failure and the audit firm's reputations are the key indicators of audit quality. However, using auditor reputation as a measure of audit quality is still an issue of much debate.

8.3.3 MEASURES OF A SATISFACTION

Client satisfaction is widely used to evaluate an audit process and assess outputs of the audit. Both interviewees from the audited companies and interviewees from the audit firms did agree that achieving audited company satisfaction is a measure of audit quality. Their opinions were, for instance:

"we have the survey of customers' satisfaction. This is another way to measure our audit quality. Audit is one kind of services; therefore, similar to other types of services, we have to ensure that our services achieve clients' satisfaction" (The audit partner from mid-tier audit firm XXC in Thailand); and

> *"audit quality is subjective concept. Therefore it cannot be measured. However, a good audit quality can be transformed into lesser error in audit and greater client satisfaction"*
> (The audit partner from mid-tier audit firm XXC in Malaysia).

8.3.4 DISCUSSION

Chapter 4 showed that there are ample quantitative measures of audit quality used by empirical studies. The interviews with some key stakeholders of the audits, which were conducted as described in this chapter, provide additional qualitative measures of audit quality. The measures of audit quality could be classified as qualitative and quantitative measures as presented in Figure 10 below.

Figure 10: Measurements of Audit Quality

Auditor reputation

Lawsuits against an audit firm

Management letter

A quality of an audit team

Auditing standards

A process of an audit

measure

measure

Value added benefits

Audit firm inspection by independent regulators

measure

An audit engagement

Outputs of an audit

Quantitative measurements

Reliable audit report

measure

An audit firm's management and

Qualitative measurements

measure

measure

Global network

Discretionary accruals, the incidence of issuing going-concern audit report, the audited clients' propensity to report earnings that meet benchmark, the restatement of prior year financial statements

Management of staff and quality control

measure

Credible financial statements

Satisfaction

measure

Technical team

Since an audit is an unobservable process, it is difficult to measure its quality by the audit process. The accessible outputs of an audit to the public, an audit report and a set of audited financial statements, are therefore used by empirical studies to quantitatively measure audit quality as summarised in Chapter 4. These quantitative measures are, for example, discretionary accruals, the restatement of previous year's financial statements and the incidence of issuing going-concern audit report. In other words, these quantitative measures are used to measure the reliability of an audit report and the credibility of financial statements. Although these quantitative measures of audit quality are visible, they might not really reflect the quality of the audit process.

The results of interviews indicate that, according to their different roles in the process of an audit and their different definitions of audit quality, the interviewees use different measures of audit quality. The audited entities and the audit firms use satisfaction as the key measure of audit quality. The reappointment of the current auditor in the next year audit is one of the signs that the audited entities and the audit firms are satisfied with each other. Audited entities use a management letter to measure what value added benefits they derive from audits. During the process of the audit, they focus on the quality of an audit team and an audit firm's technical team and global network which can be assessed by the time frame for the completion of the audit, value added benefits and additional consultations.

The applicable auditing standards are used by both audit firms and regulators to evaluate audit quality. In addition, inspection of audit firm helps the regulator ensure that an audit firm's well organised structure and management and quality control system are in place. Whilst lawsuits against an audit firm, error and/or misstatement found from the audited financial statements and reputation for a high credible audit firm are also key indicators that help the audit firm prove their audit quality to the public. Interestingly, the academic believe that audit report is less effective in measuring audit quality.

Qualitative measures of audit quality identified by the interviewees seem to be very subjective and invisible, i.e. individuals' talent and ability, applicable auditing standards and auditor reputation. Therefore, they are difficult to use in practice. Some of them might be an effective measure if the public can have inside information, e.g. an audit firm's organisational structure and management, time frame for completing audit firm, satisfaction survey and management letter. In addition, a lawsuit against an audit firm that

arises from an audit failure may be less effective measure of audit quality in countries where has a low level of investor protection and a low rate of the lawsuit against an audit firm. Among all qualitative measures of audit quality identified by the interviewees, audit firm inspection undertaken by the independent regulator seems to be the best measure of audit quality. The inspection will help the public ensure that the audit firm has a good quality audit process. The inspector will select the audit firm's audit engagements and assess their qualities. The inspection also includes an assessment of the audit firm's quality control system.

So long as there is still no generally accepted definition of audit quality, there is on-going debate on its measures. Appendix 1 of the paper *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality* points to the difficulties in measuring audit quality. It highlights that we cannot use only material misstatement as an indicator of a good or bad quality of an audit. Sometimes pre-audited financial statements do not have material misstatement. Sometimes audited financial statements with undetected material misstatement do not mean that audit quality is undermined. The detection of material misstatements also depends on obtained audit evidence and individual's judgement, since the objective of an audit is just to give reasonable assurance not absolute assurance and this reasonable assurance is based on the sufficiency and appropriateness of audit evidence.

Appendix 1 of the paper *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality* also underlines that stakeholders see audit quality differently; therefore, they have varying definitions of the terms *effective*, *efficiently, timely* and *reasonable* which are the key words of audit quality. They also have limited visible information on audit work and findings. Thus, they use different measures of audit quality depending on information that they can access. The next section will discuss the factors in promoting audit quality that are identified by the interviewees.

8.4 WHICH OTHER FACTORS INFLUENCE AUDIT QUALITY?

Chapter 4 summarised factors in improving audit quality at national, firm and engagement levels that were investigated by previous studies. This section explores the factors in promoting audit quality identified by the interviewees who have different roles in the process of an audit. For this thesis's purpose, it focuses mainly on firm and national level factors.

8.4.1 FIRM LEVEL FACTORS

The literature review in Chapter 4 summarised firm level factors in promoting audit quality that were observed by previous studies. These factors are auditor reputation, expertise in audits of specific industries and audit methodologies. In this chapter, many firm level factors are identified by the interviewees. The main factors are audit staff, audit firm's top management, audit firm's technical supporting function and the audit fee.

8.4.1.1 STAFF

The quality of the audit team, which results from individual's talent and ability, is identified as a measure of the quality of an audit process. This implies that the individual seems to be one of the most crucial factors in an audit process. Eight of 16 interviewees shared a similar view that staff are the crucial factor that helps audit firms to promote audit quality. According to the interviewee from the independent audit regulator in Singapore's experience of an audit firm inspection, the main cause of audit failures is staff quality. Her point of view was that:

> *"In this part of the world, supervision, the extent of supervision by senior, experienced people and the people supporting the auditor, these two are very important and we are finding that a lot of the audit failures or rather a lot of the engagements that have non-compliance with the auditing standards stem from these two main causes."* (The interviewee from the independent audit regulator in Singapore).

To ensure that audit firms have a good quality of staff, the interviewee from the professional regulator in Thailand, the audit partner from one local audit firm in Thailand and the interviewee from one mid-tier audit firm in Malaysia pointed to the importance of policies on recruitment and development of staff. An effective policy on recruitment could

lead an audit firm to recruit intelligent and well-experienced staff whilst an effective policy on development of staff could help an audit firm ensure that its staff are continually trained and educated. Two of them believed that:

> *"The next thing is the procedures that help improve audit quality continually. They are policies on client acceptance and recruitment and development of staff."* (The interviewee from the professional regulator from Thailand) and

> *"We have to educate our staff. Staff have to be trained in new knowledge, new accounting standards and new auditing standards when there is a specific circumstance of new products or instruments"* (The audit partner from one local audit firm in Thailand).

Not only does an audit firm focus on the quality of staff in terms of their intelligence, expertise and experience, it has to be concerned with the number of staff as well. The interviewee from one listed company in Thailand, which employed a local audit firm identified that an audit firm's number of staff is also key factor that helps promote audit quality. He mentioned that:

> *"I think staff. I think if audit firms have sufficient staff, they are able to help promote audit quality."* (The interviewee from listed company in Thailand, which employed a local audit firm)

As noted by the lecturer from Singapore and the audit partner from one of big 4 audit firms in Malaysia, not only audit assistant staff but also an auditor him/herself must be well trained and have good industry knowledge and experience. They stated that:

> *"If I look at audit quality. Audit report is only the output part of it. I would like to see actually whether the firm has qualified professional auditors, well-trained qualified auditors."* (The academic from Singapore) and

> *"There're many factors involved. First of all I think it is, you know, the experience of the auditors involved. That's one. And secondly, the knowledge the auditor has of the industry that they audit."* (The audit partner from big 4 audit firm XXX in Malaysia).

Audit team with lack of audit knowledge and expertise seems to cause audited clients a lot of problems. One interviewee from Thailand raised the issue that:

> *"If the audit team doesn't understand laws and regulations and doesn't have sufficient expertise in audit, we would waste time explaining everything, answering nonsense questions and providing them with unnecessary documents and information. We both*

waste time." (The interviewee from non-listed state-owned organisation in Thailand, which employed the office of audit general and has two listed subsidiaries).

An individual's judgement is very important for performing an audit. Therefore, audit quality is significantly influenced by individual's intelligence and ability. This highlights the importance of an audit firm's policies that are associated with its staff. For example, there is a need for effective policies on recruitment staff that are designed to target on high quality people. Policies on development of staff through the training programmes are also necessary for the audit firm to maintain its staff's good industry knowledge and experience. Importantly, the audit firm must have a number of staff that suffice for the number of its audited clients. An audit is deemed to be less effective if an audit team lacks good training and audit expertise. This, in turn, may reduce client satisfaction. The interviewees did not only underline the importance of audit staff for promoting audit quality, but also pointed to the influence of top management on audit quality at a firm level.

8.4.1.2 TOP MANAGEMENT

Five of the 16 interviewees deemed that the top management must attach high importance to audit quality and take the primary responsibility to promote audit quality. Management needs to communicate how important audit quality is to all staff. The interviewee from the professional regulator in Thailand and the interviewee from the professional regulator in Malaysia had the views that:

> *"A good management of audits is the first thing that leads to a good quality of audit. In the past 10 years, there has been the belief that audit quality stems from a good management of audits. The good management must start with the structure of the audit firm that helps promote audit quality and with the top management who have a good personal quality."* (The interviewee from the professional regulator in Thailand) and

> *"It's very much tone from the top. Why we say tone on the top from the top in the sense that the partners of the firm must be well educated in terms of audit quality, in terms of scepticism. So if they understand well, then they will pass down their knowledge to the junior level."* (The interviewee from the professional regulator in Malaysia).

The audit partner from one mid-tier audit firm in Malaysia, the audit partner from one mid-tier audit firm in Thailand and the audit partner from one local audit firm in Thailand also support that the top management significantly influence audit quality. They said that:

"The tone from the top has to basically look it starts with the need, and they felt that quality is primal. And it's not overnight, it's an intention. So that state from tone from the top it starts flowing all the way down to the vision, mission, then from the processes, policies and monitoring all the way down. So I did believe the major factors that lead to quality must be tone from the top first" (The audit partner from mid-tier audit firm XXB in Malaysia);

"Key management must take the primary responsibility to promote audit quality by sending message to all staff that it has been stressed the importance of audit quality." (The audit partner from mid-tier audit firm XXC in Malaysia); and

"Tone at the top is a key factor that helps improve audit quality. Therefore top management must attach the importance to audit quality." (The audit partner from mid-tier audit firm XXC in Thailand).

The regulators and the audit firms perceive that the top management play a prominent role in promoting audit quality. They have responsibility for raising the awareness of audit quality in the audit firm. In addition, they have to create the audit firm's good environment and culture that lead to a good audit quality.

8.4.1.3 TECHNICAL SUPPORTING FUNCTION

Three of the 16 interviewees pointed to the fact that the audit firm's technical department provides audit staff with technical training and supports audit staff and audited companies in technical knowledge. This helps promote audit quality. From the viewpoints of the audit partners from mid-tier audit firms in Malaysia,

"I believe T&T, which is the technical and training department is the backbone of audit quality also. Because they are the one who set up the processes, the monitoring and the documentation" (The audit partner from mid-tier audit firm XXB in Malaysia) and

"Training helps provide essential knowledge for all staff" (The audit partner from mid-tier audit firm XXC in Malaysia).

The interviewee from one listed companies in Thailand, which employed one of the big 4 audit firms expressed similar sentiment:

"We are looking for audit firm technical support, which is definitely supported by only a big 4" (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ).

Similarly to other professional services, a quality of the audit service hinges on the competence of the staff. An audit firm's technical support team is then deemed to be the key factor in promoting audit quality since its major responsibility is to provide the staff training and technical support. The audit firm's technical support team is also expected to provide the audited companies with technical consultations.

8.4.1.4 AUDIT FEE

Four of the 16 interviewees believed that adequate audit fees allow audit firms to invest more in people and technology and to be able to put more resources into audits. Two interviewees from different mid-tier audit firms and one audit partner from one of the big 4 audit firms in Malaysia said that:

"I will look at it as audit fees. Because the higher fees the clients have got to pay, obviously the firm would be able to then dedicate more resources into that particular engagement, thereby driving both the first factor on audit staff and the second factor on the time spent on the engagement" (The interviewee from the principal and development team of mid-tier audit firm XXA in Malaysia);

"audit fee is also an important factor that helps increase audit quality. With higher audit fee, we can hire more experienced and trained auditors" (The audit partner from mid-tier audit firm XXC in Malaysia); and

"So I think roughly these are the few key areas that will generally influence the audit, of course, fee is another area, whether the auditors are adequately compensated, whether do we receive sufficient fee for us to put into invest in our people, invest in the right technology, to acquire the skill to carry out audit, so this is our key." (The audit partner from big 4 audit firm XXX in Malaysia).

The evidence from Malaysia indicates that there might be an intense pricing competition in the market for audit service in Malaysia. One interviewee from one listed company in Thailand, which employed one local audit firm also has the same view that the audit fee is key factor in promoting audit quality. He pointed out that:

"I think there must be a good relation between audit fee and cost of audit. Audit fee must be reasonable and is based on audit work. I mean since audit firms invest more in audits, they deserve to get a good remuneration. Once they provide a good quality of audit, audit fee must be reasonable as well" (The interviewee from one listed company in Thailand, which employed a local audit firm).

8.4.1.5 DISCUSSION

From the results of the interviews, how firm level factors could promote audit quality can be illustrated as shown in figure 11 below.

Figure 11: Firm Level Factors
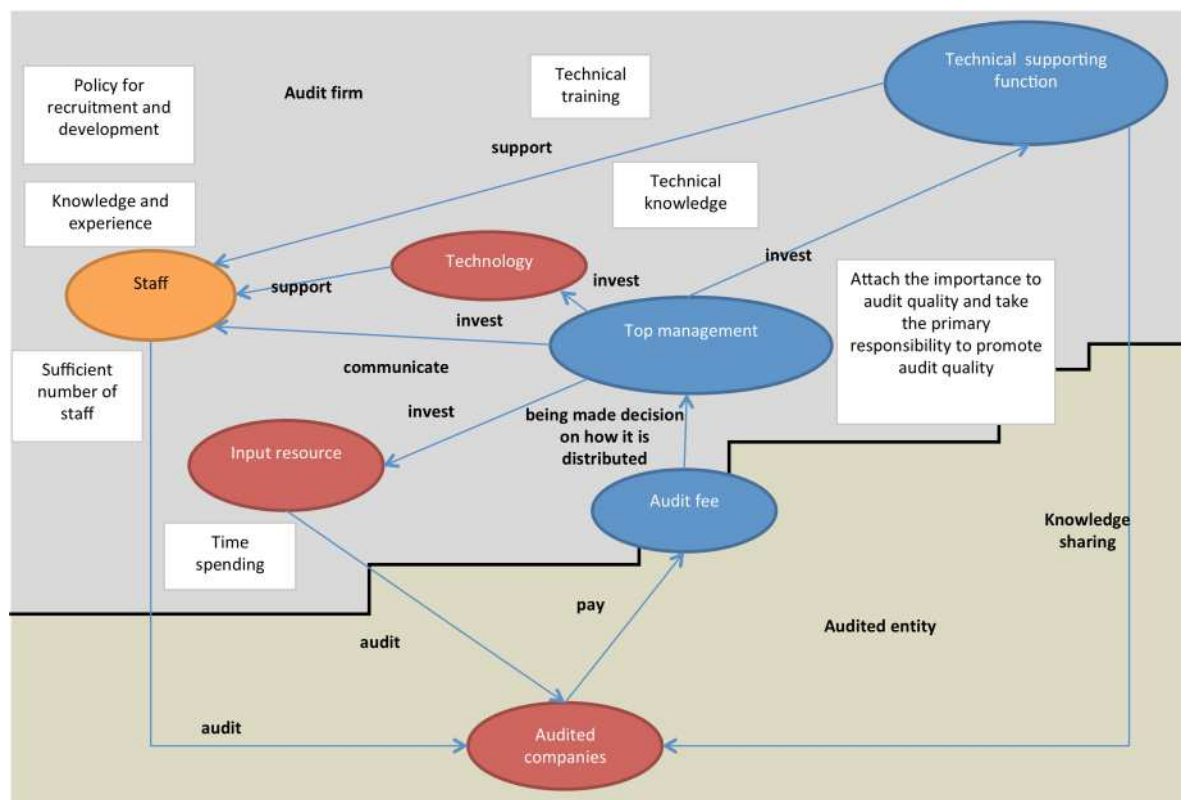
It can be summarised that top management is at the heart of promoting audit quality at a firm level. Top management has to stress the importance of audit quality, to communicate a firm's policy on audit quality to staff, to make good decisions on investing in technology and the technical supporting function that support audits, to allocate resources to audits, and to formulate a policy on staff development and recruitment. Similar to other professional service providers, well-trained and well-educated people are the most important factor that leads to a high audit quality. An effective recruitment policy helps an

audit firm recruit intelligent and highly experienced staff. To maintain staff knowledge and expertise, the technical supporting function provides technical training and technical knowledge to them. Not only does this function provide an internal service within an audit firm, it shares knowledge with an audited client as well. An audit firm cannot achieve a high quality audit if an audit fee will not lead the audit firm to have adequate resources.

The interviews here provide evidence of firm level factors that influence audit quality. At firm level, well-trained and well-educated people, the top management of an audit firm, the technical support function and the audit fee are the most important factors that lead to a high quality audit. These factors, except for the audit fee, are identical to input factors at firm level identified by the paper *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality*. The interviews in this chapter provide evidence that pricing competition in the audit fee seem to be the key issue in Southeast Asia. An intense price competition may undermine audit quality if audited companies' managements in Southeast Asia have similar perception to those in Korea. As found by Jeong and Rho (2004), audited companies' managements in Korea perceived that an audit by an independent auditor is an unavoidable cost of operating business and is unnecessary. If this perception may also exist in Southeast Asia, the audited companies' managements in Southeast Asia may prefer the auditors who offer them low audit fees rather than the auditors who provide them high audit quality. One management from the listed company in Thailand shared his opinion that audit service may be perceived as a commodity service which there is no difference among audit service providers. Therefore, the selection of an audit firm may depend on the audited companies' contentment and audit fee. His opinion was:

> *"I think quality of an audit is also about the association between its demand and supply. If purchase of the audit service were like purchase of a shirt, there would be a question why we are able to spend Bath 1,000 on a shirt and why others are able to spend Bath 10,000 on the similar shirt. Even though they are shirts, they however have different prices. I think it depends on our contentment."* (The interviewee from one listed company in Thailand which employed a local audit firm).

The paper *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality* identifies that audit methodology is the key process factor in promoting audit quality. However, the interviews here provide contradictory findings that although the interviewees defined a good quality audit as an audit that is executed in compliance with the applicable audit standards, they paid less attention to audit methodology. It can be

inferred that audit firms' existing methodologies were developed at least in accordance with the applicable audit standards. The interviewees may also believe that audit work is just performed to the minimal requirement of the auditing standards; therefore, there may be no need to develop a complicated audit methodology. This thesis finds that the development of a complicated audit methodology inevitably needs more investment and takes time. It is then beneficial for the audit firms just to use the audit methodology that is required by the standards.

Moreover, some companies may not realise the importance of an audit. They may believe that the audit is enforced just by law. Hence, they may not see any benefits from the audit. This attitude of the audited companies towards an audit may lead audit firms to perceive that it is unnecessary for them to develop complicated audit methodology. The audit partner from one mid-tier audit firm in Thailand gave the same view as the management from the listed company in Thailand. Her view was that the audited companies might not see the difference in audit services provided by different audit firms. The audited companies may only see that they have to be audited just because of law and regulation. She pointed out that:

> *"Actually all auditors' job is to draw their opinions on financial statements. Therefore audit service may be similar to agricultural products that there might not have any difference between each product. Audited clients may only think the audit is just to make their financial statements could be submitted to the Department of Business Development or could also be used for other purposes. They might not care who signs off on an audit report."* (The audit partner from mid-tier audit firm XXC in Thailand).

From the views of the management from the listed company in Thailand and the audit partner from one mid-tier audit firm in Thailand, it appears that audit methodology is seen as less important factor in promoting audit quality at a firm level. The next section will report and discuss the views of the interviewees on factors in promoting audit quality at a national level.

8.4.2 NATIONAL LEVEL FACTORS

Chapter 4 provided evidence that the transformation of the accountancy profession from self-regulation to independent regulation and the regulator's effective mechanisms to control and monitor the auditors and audit firms are key factors in promoting audit quality at a national level. These key mechanisms are audit firm inspection, a policy on investor

selection of an auditor, a restriction on the employment of the current audit firms' former partners/managers, a ban on non-audit service and a mandatory audit firm/audit partner rotation.

The interviews in this chapter also aim to identify national factors in improving audit quality. The interviewees perceive that regulators, the adoption of IFRSs and ISAs and an accounting Act are most important in promoting audit quality at a national level. They provided the following views.

8.4.2.1 REGULATORS

Nine of the 16 interviewees have a similar sentiment that regulators are the key factor in promoting audit quality at a national level. These nine interviews are from the regulators, the audited companies and the audit firms. Their opinions were, for example:

> *"...the regulatory environments in that country play a big part as well. If you look at here, in Malaysia, we have this audit oversight board, so with that AOB..."* (The interviewee from the professional regulator in Malaysia);

> *"...the regulator is a key factor to promote audit quality at national level..."* (The audit partner from mid-tier audit firm XXC in Malaysia);

> *"The regulator has to take a primary role to promote audit quality pertaining to controlling and monitoring auditors."* (The interviewee from one listed company in Malaysia, which employed big 4 audit firm XXV);

> *"Well, I think we took a very decisive step. Prior to the formation of ARCA, the profession was self-regulated and when it was self-regulated, it didn't have that rigour in policing efficiency. When ARCA was formed in 2004, we took it very seriously that we wanted to transform the profession. We wanted to give it a good name..."* (The interviewee from the independent audit regulator from Singapore); and

> *"I think it would be regulations and requirements, which impose on auditors..."* (The interviewee from one non-listed state-owned organisation in Thailand, which employed the office of auditor general and has two listed subsidiaries).

The interviewees highlighted that the regulators can promote audit through the following mechanisms.

8.4.2.1.1 AUDIT FIRM INSPECTION

In Section 8.3.1, regulators and audit firms seem to view audit firm inspection as the best measure of quality of audit process. Five of the nine interviewees in this section also highlighted that the inspection of an audit firm by the independent regulator is the key mechanism to promote audit quality at a national level. These five interviewees are from the mid-tier audit firms and the regulatory bodies. They believed that:

> *"One is the audit oversight board, which is a good thing they set up. The audit oversight board finally look into the quality of the auditors. So the quality of the auditors was, to say that, is because go back to my previous answer to say that it was a failure of the MIA in the public practice that cause the audit oversight board to raise up to the occasion"* (The audit partner from mid-tier audit firm XXB in Malaysia);

> *"The regulator is a key factor to promote audit quality at national level. For example, the major change among Malaysian auditors since the effective of AOB (Audit Oversight Board) in 2010. The auditors are more careful to do audits because they are aware of that AOB is monitoring them..."* (The audit partner from mid-tier audit firm XXC in Malaysia);

> *"...Although the profession was not very happy that we are coming out with a very strong regulator, I think now I can safely say that maybe now we are what, 9 years into the programme, the inspection programme. I think my firms do appreciate that there is a programme in place and I think they also acknowledge that, through that, Singapore has a very good reputation."* (The interviewee from the independent audit regulator in Singapore);

> *"...we have a regulatory body that inspects auditors. This leads auditors to be aware of the inspections and then they have to do their jobs carefully. We also message them about the benchmark of the inspections"* (The interviewee from the securities audit regulator in Thailand); and

> *"The inspections by the regulator and our head office drive us to conduct audits in accordance with the regulator's and our firm's standards."* (The audit partner from mid-tier audit firm XXC in Thailand).

From these five interviewees, it appears that audit firm inspection performed by the independent regulator is expected by the regulators and the audit firms to drive the audit firms to be more aware of the audit quality that they provide. This, in turn, promotes audit quality at a national level.

8.4.2.1.2 PUNISHMENT

Punishment and further actions towards an audit failure are also necessary to promote audit quality at a national level. Two interviewees from Thailand pointed to the importance of punishment and sanction. They stated that:

> *"We have to use varieties of mechanisms to promote audit quality. Punishment is also an important factor to promote audit quality"* (The interviewee from the securities audit regulator in Thailand) and

> *"...They should have the right to take action immediately. This is because this causes damage to government sector.... I don't understand how we punish auditors for an audit failure. I think there should be immediate punishment and there is a need for regulation of auditor punishment. The auditor's job is to audit other people; therefore, there should be stricter standards and regulations which impose on them. This will create the better overall picture of business at a national level."* (The interviewee from one non-listed state-owned organisation in Thailand, which employed the office of auditor general and has two listed subsidiaries).

This evidence indicates that Thailand might need the stricter punishment for an audit failure.

8.4.2.1.3 LICENSING REGISTRANT AUDIT FIRM

Licensing registrant audit firm is used to control the quality of audit firms in the stock markets. This is to ensure that these audit firms have competence in audits of listed companies. However, this sometimes causes negative side effects. The interviewee from one listed company in Thailand, which employed one local audit firm commented that a small number of auditors who registered with the securities committee led to an imbalance between listed companies' demand for audits and its supply. This may lead an auditor to have more bargaining power than an audited entity. His statement was that:

> *"Demand for audit among the listed companies is much higher than its supply. The number of listed companies increases every year; meanwhile, the number of registrant audit firms is almost constant. Therefore we don't have enough registrant auditors. I do the survey every year. All of audit firms do not want to accept new clients or to terminate existing clients... it is better for auditors to continue with the existing audit engagements because they have a good understanding of those clients' business and*

costs of audits are also less than those of new clients. I think nowadays an imbalance between demand for audit and its supply leads auditors to have more bargaining power than audited companies. Then they are choosy about clients and can force audited companies to do whatever they want." (The interviewee from one listed company in Thailand, which employed a local audit firm).

In Thailand, the regulator's existing system for licensing registrant audit firm may lead to a limited number of registrant audit firms. As a result of a small number of registrant audit firms, the imbalance between the registrant audit firms and the listed companies might be one constraint on the promotion of audit quality at a national level.

8.4.2.2 THE ADOPTION OF IFRSs AND ISAs

IFRSs issued by IFRSB and ISAs issued by IAASB under IFAC are the applicable accounting and auditing standards that help reduce the differences in local accounting and audit standards across countries. IFAC has encouraged all countries to adopt these IFRSs and ISAs. Importantly, IFRSs and ISAs are used by many organisations (e.g. the International Monetary Fund and the World Bank) as the benchmark to evaluate the effectiveness of local accounting and auditing standards. This seems to highlight the importance of the adoption of IFRSs and ISAs at an international level.

Five of the 16 interviewees accepted that the extent to which their countries bring their accounting and auditing standards into the line with international standards was a key factor in promoting audit quality at a national level. Two interviewees from Malaysia believed that:

> *"Cause few things involve* [in promoting audit quality]... *They probably are very early in adopting internationally recognised standards so that's one thing"* (The interviewee from the professional regulator in Malaysia) and
>
> *"The regulator has to take a primary role in promoting audit quality pertaining to the implementation of new standards."* (The interviewee from one listed company in Malaysia, which employed big 4 audit firm XXV).

Two interviewees from Thailand had the same views. They stated that:

> *"Our audit quality of listed companies does not fall behind other countries. We have adopted international accounting standards and audit standards and updated the change. Some accounting standards were implemented late owing to our economic*

circumstances. We fully adopted all auditing standards. We may be better than Indonesia but may fall behind Singapore. We may be at the same level as Malaysia." (The interviewee from the professional regulator in Thailand) and

"I think the first think is the standards [that will help promote audit quality].*"* (The interviewee from one listed company in Thailand, which employed a local audit firm)

However, there is also evidence that countries, where their accounting and auditing standards are not in English, may face many problems once they implement IFRSs and ISAs. Two interviewees from Thailand also pointed to the problems with the adoptions of IFRSs and ISAs. As accepted by the interview from the professional regulator in Thailand, Thailand faced a delay in the implementation of IFRSs and ISAs because its official language is not English: hence, there is a need for translating the standards from English to Thai. He said that:

"Accounting standards are set by the IFAC and used globally. Normally it takes several years for all countries to adopt the new standards. We however may take a longer time than others because we have to translate the standards from English into Thai..." (The interviewee from the professional regulator in Thailand).

As a preparer of financial statements, the interviewee from one listed company in Thailand, which employed one local audit firm, raised the point that the adoption of international standards can sometime cause a negative consequence if it is done without a study of the impact of those standards and without the preparation for the implementation. He commented that:

"When we adopt standards, we need to be more concerned with their impacts. I don't want us to be like "keeping up with the Joneses". We cannot adopt all international standards. Given the reason why we have to comply with them is better than just telling us that it is because of the international enforcement. The important thing is that we need to be educated on those standards and also need time for implementation. Effective communication is also required. Once you suddenly adopt the standards; there would be a lot of problems afterwards" (The interviewee from one listed company in Thailand, which employed a local audit firm).

ISQC1 is perceived to be the most important standard that drives the audit firm to improve and maintain their audit qualities. ISQC1 was announced in 2009, to be effective from 15 December, 2009 onwards. The audit partner from one local audit firm in Thailand believed that ISQC1, which has been effective in Thailand from 2014 onwards, would significantly improve the auditing profession in Thailand. He expressed his opinion that:

> *"I think once we adopt ISQC, it will help the auditing profession to have a good system.*
> *There will be a party who has the responsibility to monitor and control auditors and to*
> *check whether audit firms comply with ISQC..."* (The audit partner from one local audit
> firm in Thailand).

The degree to which the local accounting and auditing standards are into line with the international accounting and auditing standards is also a key national factor in promoting audit quality, especially the adoption of ISQC1. However, the translation from English into other languages seems to be the major issue that leads to the delay in adopting new standards. Although the study of the impacts of those standards before implementation might also be the cause of the delay in implementing the new standards, it helps a country to ensure that there will not be any negative consequences after new standards will be implemented.

8.4.2.3 ACCOUNTING ACT

There is also the belief that a legal accounting Act is important factor in promoting audit quality at a national level. It leads auditors and preparers of the financial statements to be aware of the quality of published financial information. The academic from Singapore expressed his view that:

> *"...Whether the accounting standards are persuasive or legislative? Singapore has*
> *chosen like Australia chose. The accounting standards have become part of the*
> *mandatory requirement under company Act. Unlike other countries where it is*
> *persuasive, persuasive means the auditor would give the qualified audit statement if you*
> *don't follow the IFRS, the financial reporting standards. Singapore is...if you don't*
> *follow the reporting standards, not only do you not get a qualified audit statement, you*
> *actually; you breach the company Act..."* (The academic from Singapore).

A country's accounting standards must be legislatively imposed by an accounting Act. This is to put a great burden of responsibility on the audit firms and the audited companies for their published and audited financial information. This, in turn, indirectly helps promote audit quality.

8.4.2.4 DICUSSION

Figure 12 below summaries the influence of key national factors on the promotion of audit quality which is based on the results of the interviews.

Figure 12: National Level Factors
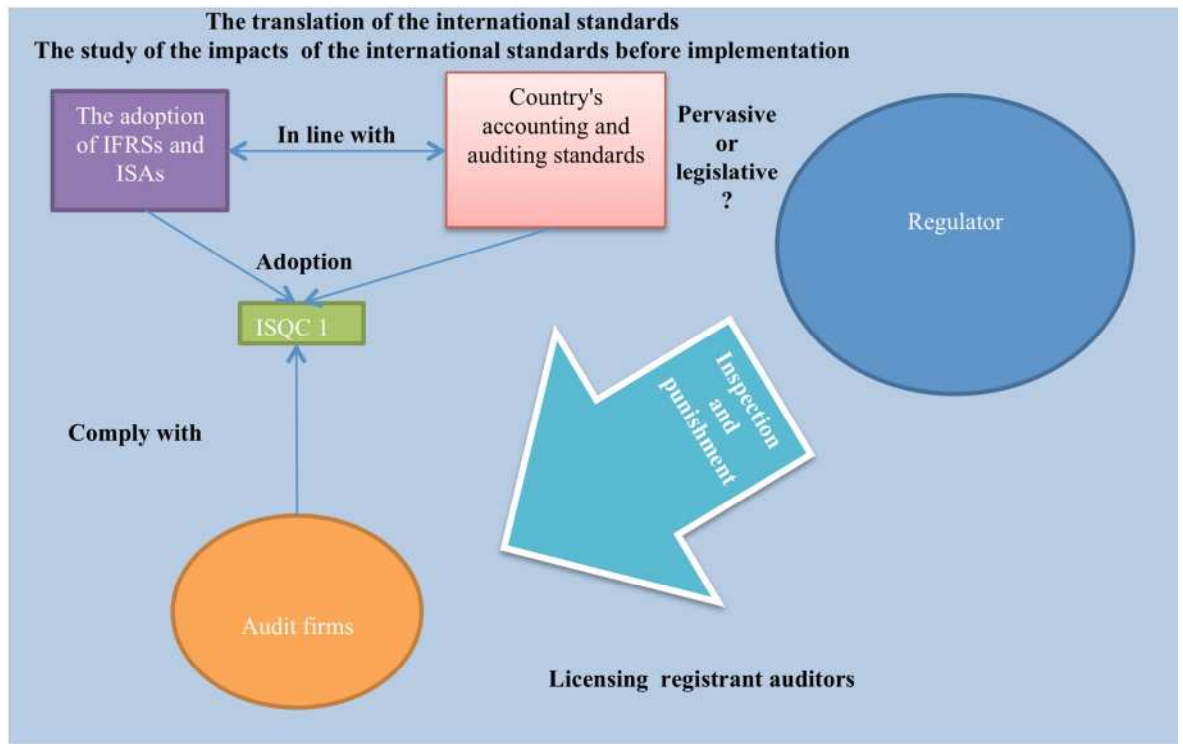
The interviewees provide evidence that highlights the role of the regulator in promoting audit quality, especially the audit firm inspection by the independent regulator. This thesis's qualitative evidence is inconsistent with Hilary and Lennox's (2005) quantitative evidence. Hilary and Lennox (2005) found that, in the US, the audit firm inspection performed by AICPA (professional regulator) remains being an effective function even though it is perceived to be lesser effective than the audit firm inspection conducted by PCAOB (independent regulator).

Hilary and Lennox (2005) conducted the study in the context of the US where investors have a high level of protection (e.g. by rules and regulations (Leuz et al., 2003)). However, this thesis's selected countries have different levels of investor protection. Importantly, there may be other national level factors that also influence audit quality. Therefore, audit firm inspection conducted by the independent regulator may be necessary for promoting audit quality in Thailand, Indonesia and the Philippines where there is a low level of

investor protection or even in Singapore and Malaysia where investors have strong investor protection.

The thesis's interviews also report findings that support the paper *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality*. First, the paper *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality* identifies that audit firm inspection is one of the key national level factors in promoting quality of audit process and quality control procedure. This thesis's interviews also found that the inspection of an audit firm undertaken by an independent regulator is an important factor in promoting audit quality in the context of Southeast Asia.

Second, the paper *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality* states that clear auditing standards is one of the key national level factors in promoting quality of audit process and quality control procedure. In Paragraph 12 of this paper, it highlights that audits need to comply with the auditing standards and audit firms' quality control systems that are required by ISQC1. This statement on the paper *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality* is strengthened by this thesis's qualitative evidence. This thesis's qualitative evidence supports that the adoption of international standards is one of the key factors in promoting audit quality in Southeast Asia, especially ISQC1 that is deemed to be at the heart of the audit firm's quality control systems.

There is also some evidence that punishment for an audit failure helps promote audit quality at a national level, especially in weak investor protection countries, i.e. Thailand. This suggests that these countries may need to restructure their legal regimes of audit liability and penalties, especially securities laws. As found by Guedhami and Pittman (2006), securities laws and a well structure of legal systems that impose on the auditors helps a country promote financial reporting quality. Evidence here is also consistent with Guedhami and Pittman's (2006) and Yu's (2011) findings that harsh penalties have an indirect influence on audit quality. However, it is inconsistent with Chan and Wong's (2002) and Patterson and Wright's (2003) findings that extending the scope of auditor accountability (Chan and Wong, 2002) and liability regimes (Patterson and Wright, 2003) do not help improve audit quality. This thesis's qualitative evidence from Southeast Asia then supports the previous studies' argument that severe punishment and heavy penalty for

an audit failure may raise the auditors' awareness of audit quality and the audit firms' motivation for maintaining their reputation and avoiding litigation cost.

Moreover, this thesis provides evidence that, to promote audit quality at a national level, accounting and auditing standards may need to be legislatively imposed. This will help a country increase the preparers' and the auditors' awareness of the quality of published financial information and put a great burden of responsibility on the preparers and the auditors. Therefore, the restructuring of a country's legal regime associated with the accounting profession may need to consider imposing the accounting and auditing standards as the legal enforcements.

Furthermore, this thesis raises two issues that could constrain the promotion of audit quality at a national level. First, the translation of the international standards from English into other languages may lead to the delay of the adoption of the standards in those counties, e.g. Thailand. The delay of the adoption of the standards may have a negative side effect for audit quality at a national level. Even though the study on the impacts of new standards and developed planning before implementation are also the cause of the delay in adopting the new standards, they are necessary in order to ensure that there will be no seriously negative impact after the new standards have been implemented.

Second, licensing registrant audit firms may help the public ensure that the audit firms have competency in audits of listed companies. However, its side effect is that a number of registrant audit firms might be limited, leaving little choices of audit firms with high demand for audits. This may not create a good environment for promoting audit quality at a national level, especially if mandatory audit firm rotation is imposed to promote audit quality or when switching of audit firm takes place to look for higher audit quality providers. Importantly, evidence from Thailand indicates that a small choice of registrant audit firms may lead auditors to have more bargaining power than audited companies. This is inconsistent with the findings of previous studies that dominant shareholders have strong power over auditors (Fan and Wong, 2002).

8.5 BIG FIRM VERSUS NON-BIG FIRM

This section reports the participants' perspectives on the different levels of audit quality between a big firm and a non-big firm and on the different levels of audit quality within a big firm group.

8.5.1 DOES A BIG FIRM HAVE HIGHER QUALITY THAN A NON-BIG FIRM?

As discussed in chapter 4 and 5, previous studies provided varying results to the research question as to whether a big firm is of higher quality than a non-big firm. Nonetheless the classification of audit firms into a big firm and a non-big firm and the assumption that a big firm has a higher audit quality than a non-big firm is widely accepted. This thesis also performed quantitative tests to this research question in Chapter 7. The results of the test provided evidence that a big firm is less tolerant of discretionary accruals reported by audited clients in comparison to a non-big firm. This led to the conclusion that a big firm is of higher audit quality than a non-big firm. The interviews in this chapter explore this issue further.

13 of the 16 interviewees agreed with the general belief that a big firm has higher quality than a non-big firm. Two audit partners from big 4 audit firms gave their points of view that:

> *"At least in the context of Malaysia, audits delivered by big firms like big 4s are generally of much higher quality than those smaller to mid-tier firms..."* (The audit partner from big 4 audit firm XXX in Malaysia) and

> *"Generally it's quite true* [that a big firm is of higher quality than a non-big firm]*"* (The audit partner from big 4 firm XXY in Singapore).

All four senior managements from the regulatory bodies had the similar view on this belief. One of them said that:

> *"For Thailand, from the results of the inspection, yes, it is true* [that a big firm is of higher quality than a non-big firm]*"* (The interviewee from the securities audit regulator).

Four interviewees from accounting/finance departments of listed companies, which two of them employed big 4 audit firms as their auditor also agreed with this belief. One of them opined that:

> *"A big 4 is different from a non-big 4 in terms of audit quality..."* (The interviewees from one listed company in Malaysia, which employed big 4 audit firm XXV).

The audit partner from the local audit firm and the audit partner from one mid-tier audit firm in Thailand accepted that a big firm has higher audit quality than others. One of them stated that:

> *"Big 4s have an advantage over us."* (The audit partner from one local audit firm in Thailand).

This general belief was also accepted by the academic from Singapore. He said that:

> *"Well, I think... you think in terms of reputations. What I mean is that big audit firms will always have the reputation to keep..."* (The academic from Singapore).

The results of the interviews indicate that all stakeholders of audits have general agreement that a big firm is of higher audit quality than a non-big firm, a belief widely accepted in Southeast Asia.

The 13 interviewees above gave similar reasons for supporting their opinions. Most of them believed that a big firm has wealthier resources than a non-big firm and therefore has greater advantages over a non-big firm. Firstly a big firm can invest more in its people. The audit partners from big firms pointed out that, owing to its reputation and resources, their firms have a higher chance to recruit high quality staff. They stated that:

> *"...generally big firm because of their resources and because of the name, so they tend to be able to get better staff to join the firm compared to small firms because of lack of resources..."* (The audit partner from big 4 audit firm XXY in Singapore); and

> *"the amount of investment that the big 4s put into our people. We invest a lot in our people in terms of making sure that we recruit the best people available..."* (The audit partner from big 4 audit firm XXX in Malaysia).

The views of the interviewee from the profession regulator in Thailand and the interviewee from one listed company in Thailand, which employed one local firm, are similar to those

of the partners from big firms in Singapore and Malaysia. They pointed out that a big firm can attract high quality students. Their statements were that:

"...*Students who have excellent academic performance from famous universities have a high demand for working at big firms. It means that big firms have a big chance to employ high personal quality staff...*" (The interviewee from the professional regulator in Thailand) and

"*The big 4s have a better chance to recruit quality staff. They have a brand name. Everyone wants to work at the big 4s rather than the small firms.*" (The interviewee from one listed company in Thailand, which employed a local audit firm).

Secondly a big firm can invest more in its training and technical team. This helps a big firm maintain and develop its staff's knowledge and expertise. The audit partner from one of the big 4 in Singapore pointed out that:

"...*When they come and join us, the second factor will be training. So even a university also builds up you to certain foundation knowledge, after that when you join a professional firm, you need to undergo continuous learning education to build up further practical knowledge...and in big firms again because of resources your training programme tends to be more comprehensive compared to a small firm whereby it probably just throws you on the job. So these are the two key basic differentiating factors...*" (The audit partner from big 4 audit firm XXY in Singapore).

The interviewee from the professional regulator from Malaysia and the interviewee from the professional regulator from Thailand also believed that a big firm's staff have a better chance to gain good training since a big firm has more resources and its own technical team. Their points of views were that:

"...*every now and then you have the updates of the IFRS, International Financial Reporting Standards, and every now and then you have the update of auditing standards. And for the update, you need resources, you need to send people for training, you need to have your department or what we call the technical department that keep updates on the development...*" (The interviewee from the professional regulator from Malaysia) and

"...*A large number of clients and staff also drive big firms to have a lot of proper training...*" (The interviewee from the professional regulator in Thailand).

Thirdly with its sufficient resources a big firm can invest more in other infrastructures, for example technologies. The interviewee from the independent audit regulator in Singapore shared her view that:

> *"...because they have also started earlier, they have grown their business to a state whereby they can afford to apply some their past profits to invest in quality measures, to invest in infrastructure, I think that helps..."* (The interviewee from the independent audit regulator in Singapore).

The audit partner from one of the big 4 audit firms in Malaysia provided the fact that his firm invests in a lot of technology and other infrastructures. His statement was that:

> *"...in terms of making sure that we invest sufficient in our people for them to acquire the right skills to do it and also invest in a lot of technologies. So that in a way audits are being done effectively and efficiently. And we invest a lot in building up the infrastructures..."* (The audit partner from big 4 audit firm XXX in Malaysia).

A big firm has a wealth of resources that allow it to invest more in technical teams, training programmes and technologies and to have a better chance of recruiting high quality staff. Therefore, a big firm is perceived to have higher audit quality than a non-big firm. However, two interviewees from different mid-tier audit firms contended that the mid-tier firms in Malaysia have the same level of audit quality as a big firm. This is because they have their own global standard methodologies developed by their head offices just as a big 4 audit firm has. One of these two interviewees accepts that a big 4 audit firm has a higher audit quality in the financial service industry but not in the non-financial service sector. They pointed to the fact that:

> *"..When people look at a big firm, in XXB in Malaysia, there is big 4. But very surprisingly the audit oversight board in Malaysia took XXB as one of the six significant firms. And I believe that XXB, Pricewaterhouse, KPMG, they have their own methodology and I believe that the audit oversight board which is the auditors of the auditor and acknowledges the various methodology... I don't see the difference between big boy and small boy..."* (The audit partner from mid-tier audit firm XXB in Malaysia)
> and

> *"...if you were to ask me, would there be a difference in audit quality between a "big 4" versus the other large firms. Then generally the answer would be "no" with the exception probably of a specific audit of industry, the banking industry or financial services industry... But if you talk about non-financial services sector, then I don't really think that there would be a difference the big 4 and the other two large firms. But*

if you're talking about these two large firms versus the rest, then I would say possibly that's going to be, you could see a big difference there. Because for one, audit tool comes in so the large firms are known to spend a lot of resources on developing an audit tool to automate the audit process whereas there could be resource constraints when it comes to the other non-large firms. Second one then would come in terms of a systematic audit methodology. So it's quite well known that the big 4 have their own audit manuals and not surprisingly the non-big 4 like XXA and XXC, we do have our own audit methodology and manual as well..." (The interviewee from the principal and development team of mid-tier audit firm XXA in Malaysia).

Interviewees' perception of big firms are of higher audit quality than non-big firms strengthen the results of the probit model in Chapter 7. In Southeast Asia, a general belief that big firms are of higher audit quality than non-big firms appears to be widely accepted. Big firms may be perceived to have wealthier resources which lead the big firms to have better advantages over non-big firms in terms of quality of staff, training and infrastructures. From the interviews, it appears that big firms themselves and local audit firms in Southeast Asia deem that big firms outperform other audit firms. However, mid-tier audit firms in Malaysia see themselves as comparable to big firms. They believe that they also have a standard audit methodology, which was developed by their head offices. This poses a question as to whether the classification of audit firms into a big 4 auditor and a non-big 4 auditor is still valid since there is a growing importance of mid-tier auditors and/or raises doubts as to whether the interviewees bias the answers of the interview questions.

8.5.2 ARE BIG FIRMS HOMOGENOUS IN TERMS OF AUDIT QUALITY?

As well as possible differences between big/non-big audit firms, there may also be differences in audit quality between different big 4 audit firms. Empirical studies, for example, Bauwhede et al. (2003), Whisenant et al. (2003), Fan and Wong (2005), and Carey and Simnett (2006), believed that firms within the big firm group have the same level of audit quality. Therefore, they define "big audit firms" as in the singular "a big firm". However, the results of this thesis's probit model in Chapter 7 provided contradictory evidence that national level factors (e.g. level of investor protection) may lead audit firms within the big firm group in one country or in different countries to have different levels of audit quality.

Seven interviewees from the big 4 audit firms, the regulators and the listed companies, which selected a big 4 as their auditors and the academic were asked to give their opinions on the difference in audit quality among audit firms within a big firm group. Two of them agreed that all big firms have the same level of audit quality. They commented that:

> *"I don't know about the other big 4s audit quality. Generally my view it won't have significant differences because big 4s in terms of skills and operations we are all quite about there, is all within same band."* (The audit partner from big 4 audit firm XXY in Singapore) and

> *"it's true* [that firms within the group of big firm have the same level of audit quality]*"* (The interviewee from the professional regulator in Malaysia).

On the other hand, four of the seven interviewees disagreed with the first group of interviewees. The audit partners from one of big 4 audit firms in Malaysia pointed out that:

> *"..My assumption would be all the big 4s would more or less comply with all the quality requirements that they have to comply with..."* (The audit partner from big 4 audit firm XXX in Malaysia)'.

The interviewee from the independent audit regulator in Singapore provided a similar view to the audit partners from one of the big 4 audit firms in Malaysia. Her opinion was that:

> *"I think it depends on how you want to run the firm, what's the tone at the top and what the resources are that you want to put in...So no, we don't see that every big 4 is the same...One would be better than...the rest, one would be worse than the rest..."* (The interviewee from the independent audit regulator in Singapore).

Importantly, from their experiences in selecting audit firms, the interviewee from one listed company in Malaysia and the interviewee from one listed company in Thailand, which employed the different big 4 audit firms, revealed that the audit firms within a big firm group do not have equal competency. They gave the fact that:

> *"...firms within a big firm group do not have the same level of audit quality. Based on the experience in the process of auditor selection, in which all big 4s participated in the tender, as the result of the evaluation of their proposals, two of them were eliminated. This indicates there are only two of big 4s that have a strong competency. They have good technical support that can help them provide other non-audit services, especially tax advisory..."* (The interviewee from one of listed company in Malaysia, which employed big audit firm XXV); and

> *"…Some big 4s perhaps have a better performance than other big 4s. It is possible that*
> *there is the difference among them…We have the rank of individual big 4s in our mind…"*
> (The interviewee from one of listed company in Thailand, which employed big 4 audit
> firm XXZ).

However, the academic from Singapore believed that there is a slight difference in audit quality within the big firm group. He expressed the view that:

> *"…I think they are close enough. If they are not close enough, if the audit firms' quality*
> *is very different, then their rankings will be very different… Then you wouldn't have a*
> *class of big 4s and then the next 10…"* (The academic from Singapore).

In addition, the interviewee from professional regulator in Malaysia and the interviewee from the securities regulator in Thailand added that there might be a difference in audit quality even among the same big 4 in different countries. They stated that:

> *"…If you look at one "big 4" report in Singapore as compared to looking at the same*
> *"big 4" firm in Malaysia, you still tend to have that impression that the big 4 in*
> *Singapore will give you a better audit quality, a better reporting…"* (The interviewee
> from professional regulator in Malaysia) and

> *"…I would like to stress that we cannot tell ones…which one of big 4's branches are the*
> *best or whether one of big 4s in one country is better than other branches. However, it is*
> *fair to state that the same big 4 but in different countries have different levels of audit*
> *quality…"* (The interviewee from the securities regulator in Thailand).

There is still no clear evidence that firms within the big firm group have the same level of audit quality. However, there is some evidence that the listed companies from different counties, which employed some of the big 4 audit firms, perceived that audit firms within a big firm group have different level of competence and audit quality. This indicates that the quality of a big firm possibly varies from firm to firm and also from country to country. This could support the results of this thesis's probit model in Chapter 7 and Maijoor and Vanstraelen's (2006) comparative study of France, the UK and Germany.

8.6 DOES LONG AUDIT FIRM TENURE IMPAIR AUDIT QUALITY?

This section moves the focus on the discussion to the influence of audit firm tenure on audit quality. Previous literature has indicated that long audit tenure might lead an auditor to have a close relationship with his/her client. A close relationship between them may cause an auditor to compromise with management and to be over-reliant on his/her client.

This, in turn, can impair auditor independence and scepticism (Carcello and Neal, 2000; Menon and Williams, 2004; and Lennox, 2005). Since auditor independence and scepticism are key factors in promoting audit quality, it is implied that long audit tenure might undermine audit quality. The results of the probit model in Chapter 7 also indicated that when audit firms have incentive to maintain their clients, they would be more tolerant of their clients' earnings management which is this thesis's proxy for audit quality. Thus, audit firm tenure either with a big firm or a non-big firm impairs audit quality. The interviewees shared their perspectives on the impact of audit firm tenure on audit as follows.

Seven of the 16 interviewees had the sentiment that long audit tenure leads to familiarity and close relationships with the client and, in turn, possibly reduces professional scepticism and impairs auditor independence. From this sentiment, it seems reasonable that long audit tenure could impair audit quality. The two professional regulators interviewees in Malaysia and Thailand commented that:

> *"...I think the most important about audit quality is what we call the professional scepticism. If you have an unusually long relationship between the client and the auditor, I am not saying it must, but most of the time your professional scepticism may reduce. And once your professional scepticism reduces, your audit quality may be affected..."* (The interviewee from the professional regulator in Malaysia) and

> *"Long audit tenure does not lead to a close relationship between auditors and audited companies' management. It however leads audit works to be less challenging for auditors, with the result that they may neglect some issues."* (The interviewee from the professional regulator in Thailand).

Two of the seven interviews are the audit partner from one of the big 4 audit firms in Singapore and the audit partner from one local audit firm in Thailand. They gave their views that:

> *"...if we put a long period of time, our independence would be impaired because we are too close to the client, we compromise…"* (The audit partner from big 4 audit firm XXY in Singapore) and

> *"we worry about the familiarity between auditor and audited company. Long audit service may lead to a compromise between an auditor and an audited company because of the close relationship between them."* (The audit partner from one local audit firm in Thailand).

Two of the seven interviewees are the interviewee from one listed company in Malaysia, which employed one of the big 4 audit firms and the interviewee from one non-listed state-owned organisation in Thailand. They accepted that this issue might occur. One of them said that:

> *"it is possible that long audit firm tenure can impair audit quality because an audit partner and manager might have close relationship with their clients. Finally this can impair audit independence."* (The interviewee from one listed company in Malaysia, which employed big 4 audit firm XXV).

One of the seven interviewees is the academic from Singapore. His view was:

> *"...Well, I think, of course, familiarity always breed contempt, as it does...in the sense that... sometimes familiarity also to a certain extent lowers one's guard, lower ones...be careful with the things they do. A relationship can create blind spots..."* (The academic from Singapore).

However, three of the 16 interviewees argued that long audit tenure would not impair audit quality but could generate enormous benefits for both audit firms and audited entities. An auditor could accumulate knowledge of, and experience, in a client, which could lead the auditor to be expert in auditing a specific industry. The accumulated audit knowledge and experience, in turn, could help save the cost of an audit and even client's expenses. Two of these three interviewees are from different mid-tier audit firms in Malaysia. Remaining one is audit partner from one big 4 audit firm in Malaysia. One of them expressed the view that:

> *"...we do believe that if you have a frequent change of auditors, it would actually impair audit quality rather than do any good. Reason being: the new auditors would need to accumulate their audit evidence and their understanding of the client all over again. And that learning curve process is quite costly and you don't always get it right in the first year of an audit...I would look at it would be the fact that we view audit evidence as a cumulative experience. Therefore if we are able to continue in engaging a particular audit, a particular audit client, we would be able to share about that particular information across industry or across even the same clients within the firm themselves. And therefore that leads actually to cost savings to a client and cost savings can be translated into many forms, you could hire more accountants or you could actually ask the auditor to have more staff on the job, lesser time, so to speak, on a job as well..."*
> (The interviewee from the principal and development team of mid-tier audit firm XXA in Malaysia).

Five of the 16 interviewees believed that long audit service has both pros and cons. Two of them are the audit partners from the same mid-tier audit firm in Malaysia and Thailand. One of these audit partners stated that:

> *"...Frankly, I think we can gain benefit from long audit tenure. Long audit tenure leads us to have familiarity with the client. Although we have high turnover of audit team members of each audit engagement and normally our audit teams change every two-three years, we still have audit partners who have experience with client. Nevertheless, long audit tenure also leads to a close relationship between an auditor and management, with the result that it might lead to a compromise between them..."* (The audit partner from mid-tier audit firm XXC in Thailand).

Unlike the two interviewees from the professional regulators in Malaysia and Thailand, the interviewee from the independent audit regulator in Singapore and the interviewee from the securities regulator in Thailand had similar views with this group of interviewees. One of them expressed her sentiment that:

> *"I think this issue of independence is hotly debated around the world. There's always the threat of familiarity of course and then that leads the auditors to be very relaxed about exercising professional scepticism..., there are pros and cons about changing auditors as well. Because every time you change an auditor that would be the year where the management can take advantage of the knowledge gap to hide certain things. I don't have any strong views about that..."* (The interviewee from the independent audit regulator in Singapore).

The interviewee from one listed company in Thailand, which employed one big 4 audit firm, had different view with the interviewee from one listed company in Malaysia, which also employed one big 4 audit firm. He commented that:

> *"We have to weigh audit firm rotation's pros and cons. When we changed audit firm, for the first two years, the new audit firm needed to gain a familiarity with us. Although the new audit firm has a better audit independence but it takes time to the firm to have learning curve of our business. With familiarity, an auditor can perform a better audit..."* (The interviewees from one listed company in Thailand, which employed big 4 audit firm XXZ).

However, one of the 16 interviewees from one listed company in Thailand, who had selected a local audit firm as an auditor, believed that the impact of long audit firm tenure on audit quality depends on the individual auditor rather than on the audit firm. Long audit firm tenure can imply that the client does not pose an audit risk to the auditor and the client itself is satisfied with the audit service provided by the auditor. His statement was that:

"In my opinion, it depends on individual auditor not firm, time or other thing. Engaging in one audit firm for a long period of time indicates that we can trust each other. If we did something badly, in the next year the audit firm would avoid the risk of audit failure and reject to continue with our audit engagement. At least we are okay and our auditor still continues to audit us. Meanwhile we also satisfy their services although sometimes they submitted financial statements late or there were other matters during the audits. We accepted that and are also willing to be in tune with them and discuss the matters..." (The interviewee from one listed company in Thailand which employed a local audit firm).

Two of the 16 interviewees highlighted that the public might have negative perspectives towards companies that changed their audit firms. They pointed out that:

"...In terms of a perspective on changing auditor, if provided information was unclear, it could lead public to have negative attitude toward changing auditor rather than positive one. Public perhaps assume that there is the disagreement between auditor and audited entity or company has something wrong..." (The interviewee from one listed company in Thailand which employed a local audit firm) and

"...it's the perception issue, the perception of audit quality. If a client keeps changing auditor every year, we would say that case of perception that something is very wrong with the preparers themselves rather than the auditors..." (The interviewee from the principal and development team of mid-tier audit firm XXA in Malaysia).

The interviews here do not provide clear evidence that long audit tenure impairs audit quality. The interviewees within one country and across countries have varying perspectives on the impact of long audit tenure on audit quality. However, to address this issue, the interviewees believed that a periodical audit team/partner rotation would be more effective than a periodic audit firm rotation. Only the audit partner from one of the big 4 audit firms in Malaysia believed that neither audit firm rotation nor audit partner rotation would be the best way to address this issue. He raised the point that, as a result of audit firm/partner rotation, a successor audit firm would need to put more investment into the process of understanding the client's business. This causes the successor audit firm a high cost of an audit in the first year of a new audit engagement. He stated that:

"...well, certainly, if there's a regulation in place that required company to rotate auditors after certain years, this definitely would help improve the independence of the auditors. But in terms of improving audit quality, I am not so certain. Because I think if you rotate the audit firm too often or rotate the auditors too often, it certainly would drive the cost of the audit upwards. And, so the cost of audit would definitely increase, going far. Because, when a firm accepts a new client in the first year of engagements,

we have to put in a lot of cost to set up the system to try to understand the business of our clients so these are all costs... There are many ways that firm could do or regulator could do to improve the level of quality..." (The audit partner from big 4 audit firm XXX in Malaysia).

The remainder interviewees' views on the policies on mandatory audit firm/partner rotation are discussed below.

8.6.1 AUDIT FIRM ROTATION

Audit firm rotation is expected to promote audit quality by improving auditor independence. Therefore, some countries, for example Italy, Brazil, Austria and Spain, have imposed a mandatory audit firm rotation on their listed companies (Cameran, Vincenzo and Merlotti, 2005). The tests of the probit models in the previous chapter also suggested that mandatory audit firm rotation might be effective to promote audit quality, especially when successor audit firms are more conservative in their first year audit of new clients.

However, only the audit partner from one mid-tier audit firm in Thailand supported a policy on audit firm rotation. This is because she believed that Thai culture might undermine the current mandatory for audit partner rotation. Her point of view was:

"I do support the policy on mandatory for audit firm rotation. I don't think the current mandatory for audit partner rotation is the efficient way. When an audit engagement is moved from one audit partner to other one in the same office, a new audit partner may have a seat and consult with a former one about his/her audit's issues. This is Thai culture. I mean a previous audit partner may influence the current year's audit, especially when he/she is more senior than a new one. I believe that mandatory for audit firm rotation might be more efficient than for audit partner rotation." (The interviewee from mid-tier audit firm XXC in Thailand).

The possibility of bias against small audit firms was also raised as these small firms were perceived to be incapable of having an effective policy on audit partner rotation. The audit partner from one of the big 4 audit firms in Singapore believed that mandatory audit firm rotation would be necessary only for small audit firms. He stated that:

"I don't think it is necessary for big firms, no. But if it's for small firms, then it is a different story. So we take small firms off side. The big firms, I think because of the national level policies, because of individual big 4 we have our own rules, own checks

and balances. These two are sufficient to protect audit quality at a certain level..." (The audit partner from big 4 audit firm XXY in Singapore).

He explained that his firm has had an effective internal control system. This system helps his firm make sure that audit independence is not impaired even when it has been employed as the auditor of one company for a long period of time. He added that:

"...generally we internally have certain check and balance to make sure that we're, we stay independent even though with the client for many years. Firstly, the whole audit process have to be subject to independence, basically before you start an audit and during an audit, you're gonna confirm, you're gonna look at the system to make sure that audit team is independent of client. And then after that the audit process itself we have to be independent whereby there is a check and balance. Even at engagement partner's level, I would have another partner to look at the decision made by the engagement team. That partner will have no relationship with client so very independent. And of course thirdly other than that we still have an internal audit whereby they will go around the region, go around the world, to select files to recheck again the way we audit. And fourthly the audit team, the audit partner will have to be rotated after certain years, for listed companies after five year, for non-listed companies after five years. So there will be this rotation proceeds to ensure that we are not too close to the client..." (The audit partner from big 4 audit firm XXY in Singapore).

The interviewee from one listed company in Thailand, which employed one of the big 4 audit firms, the interviewee from one non-listed state-owned organisation in Thailand, which employed the office of auditor general, and the audit partner from one mid-tier audit firm in Malaysia had similar views that all patterns of switching audit firm may not actually promote audit quality. The interviewee from one listed company in Thailand, which employed one of the big 4 audit firms, agreed that change in audit firms may help promote audit independence. However, the change in audit firms would promote audit quality only when it was within a big 4 group. His statement was:

"At some point in time, we will change audit firm even we believe that its independence still exists. For example, we employed one of big 4s for 9 years and then have changed to other one of big 4s. And now the incumbent audit firm has provided an auditing service for us for 6 years. I am pretty sure that we will switch audit firm in the future although we are happy with our incumbent audit firm...It depends on the successor audit firm. Switching audit firm helps promote audit independence. We believe the change in audit firms within a big 4/5 group." (The interviewee from one listed company in Thailand which employed big 4 audit firm XXZ).

The audit partner from one mid-tier audit firm in Malaysia added that changing audit firm to small audit firms with an aim at paying low audit fee is a sign that audit quality is impaired. This is owing to the fact that these local audit firms lack quality control systems required by ISQC1. His view was:

> *"I would say that yes and no. Why do I say yes and no? It's because it depends on the firms. Are they at that level? Which means we assume that it's a level playing field. Everyone has to comply with the ISQC...We are not big boys, we are not small boys, we are in between. So when they switch auditor not because of independence, because of fee, they go to the lower level and at low level it is a sole proprietor. Can the sole proprietor meet the criteria requirement? The answer is no."* (The audit partner from mid-tier audit firm XXB in Malaysia).

Meanwhile the interviewee from one non-listed state-owned organisation in Thailand, which employed the office of auditor general pointed out that rotation of audit firm have pros and cons. The rotation of audit firm will help improve audit quality if the new audit firms have a good understanding of their clients in the first year audits after switching audit firm. If not, it will undermine audit quality. He said that:

> *"It has pros and cons. If new audit team comes without a good understanding of our business, we will gain benefit from them. They should give us good recommendations because they have a fresh pair of eye and a lot of experience in audits of other organisations. This helps us see new risks or issues, which existing audit team and we perhaps haven't known. But, by contrast, if the new team is not expertise, it is a con. Progress of audit might be slow. It may be difficult for them to make decision and to perform work."* (The interviewee from non-listed state-owned organisation in Thailand which employed the office of auditor general and has two listed subsidiaries)

8.6.2 AUDIT PARTNER/TEAM ROTATION

10 of the 16 interviewees perceived that audit firm rotation would be unnecessary in Southeast Asia because its costs may outweigh its benefits. They also believed that audit partner/audit team rotation is more effective policy than audit firm rotation. In comparison to audit partner rotation, switching audit firm may cause more negative consequences. The interviewee from the professional regulator in Thailand shared his view that an audited client sometimes could switch audit firm because a new audit firm would offer it a lower audit fee. The low audit fee could also imply that an audit could be conducted at low level of quality. He said that:

> *"...In case we have mandatory audit firm rotation, it might be beneficial only for clients. Clients change audit firm because they need to reduce audit fees. Since the audit fees reflect amount of audit work, there might be an unforeseeable danger of reduction in audit fees resulting from switching audit firm..."* (The interviewee from the professional regulator in Thailand).

An audited entity inevitably wastes time on educating a new audit team. The interviewee from one listed company in Malaysia, which employed one of the big 4 audit firms, and the audit partner from one mid-tier audit firm in Malaysia pointed out that:

> *"...it is unnecessary that switching audit firms can help promote audit quality. Quality of audit staff rather than audit firm helps promote audit quality. Moreover changing audit firm can cause a timing issue because the company has to put a lot of effort into educate a new audit team..."* (The interviewee from one listed company in Malaysia, which employed big 4 audit firm XXV) and

> *"it's also not to say it's not good. But you will basically create a lot of problems, not to us but to the client. Because clients when there is a new auditor, they are bound to go through all entire new processes of information..."* (The audit partner from mid-tier audit firm XXB in Malaysia).

Not only an audited entity but also an audit firm may waste time and resources if there is a requirement of audit firm rotation. The academic from Singapore gave his point of view that:

> *"...we don't have to be so drastic that we must change the audit firm per se. But I think you just have to change the audit partners because the problem lies in understanding the business, you're starting up all over again, it's not easy..."* (The academic from Singapore).

According to the view of the interviewee from one mid-tier audit firm in Malaysia, audit firms could maintain audited clients and have accumulated specific audit knowledge of, and experience, in those clients. Although there is an audit partner/team rotation, knowledge of those clients' businesses would be able to be shared within the firms. This is beneficial to audited clients because they would not waste too much time to educate audit teams. Importantly, audits will be performed by a new audit partner/team who have a fresh pair of eyes. This is a win-win for auditors and audited clients. He believed that:

> *"I think switching the audit firm doesn't promote audit quality. Switching audit partners or rotating the partners would actually retain audit quality because the audit evidence remains with the firm. Rotating partner actually is good in the sense that it brings a new*

or a fresh perspective to the audit client itself. So if you do it once every seven years or five years, the client enjoys the fact that every five years a fresh pair of hands comes in, takes a look and actually could say I am new to this engagement..." (The interviewee from the principal and development team of mid-tier audit firm XXA in Malaysia).

The audit partner from one mid-tier audit firm in Malaysia said that they have a policy on audit partner rotation that is required by the ISQC1 and procedures for making sure that there is no threat of audit dependence even when they provide one client with a long audit service. He believed that the rotation of the audit partner/team helps an audit firm and the public ensure that an audit is performed by a fresh pair of eyes. His statement was:

"when we are the ISQC and by law forces us to have this five years rotation. By virtue of this five years rotation, the engaging partners' responsibility over and in that I would not say that there is impairment in such a way because the internal ISQC which enforce the internal policy and processes forces the people to rotate every five years. So you can notice that whenever there is a new partner coming in, they can see that he has a different angle. So he may look into a different thing and different findings. So by virtue of that I would say that not really there is an impact on impairment ... how strong is your independence of your individual partners also play a role. That's where the firm need to enforce from the tone from the top about the independence, the performance measurement and also that gives the engagement partner freedom to let go job and to resign" (The audit partner from mid-tier audit firm XXB in Malaysia).

However, the interviewee from one listed company in Thailand, which employed one local audit firm, argued that audit partner rotation might not be an effective mechanism to promote audit quality. It also depended on an audit firm's culture and the individual partners. He expressed the sentiment that:

"...I think audit partner rotation is like fooling yourself. If you and I were audit partners of one audit firm, what does it matter that transferring audit engagement from me to you? I can still guide what you should do. We are in the same firm. We are trapped in this cycle. Rotating audit partner is good for having an audit with a pair of fresh eyes. You are responsible for this client. It is not my responsibility anymore. I may be able to compromise with the client easily if I have familiarity with them. But you may not. However I still can convince you. This depends on how a position of seniority I am. I think rotation of audit partners is still a good requirement. It's not perfect. But it's much more better than that we do nothing..." (The interviewee from one listed company in Thailand, which employed a local audit firm).

8.6.3 DISCUSSION

The interviews here show mixed findings. Some evidence supports the notion that long audit tenure impairs audit quality because it leads to familiarity and close relationships between an auditor and a client, which could possibly reduce professional scepticism and impair audit independence. Some evidence indicates that despite the negative impact that long audit tenure could have on audit quality, both audit firms and audited entities could derive benefits from long audit tenure. It leads an auditor to accumulate knowledge of and expertise in a client, by which he/she eventually becomes an expert in audits of a specific industry. Accumulated audit knowledge and experience, in turn, could help save the cost of an audit and even the client's expenses. Some evidence points out that long audit tenure has both pros and cons. In the context of Southeast Asia, there is evidence that existing mandatory audit partner/team rotation rather than the mandatory audit firm rotation is deemed to be appropriate to address the perception that long audit tenure impairs audit quality.

8.7. WHAT IS EARNINGS MANAGEMENT?

The section reports the interviewees' perspectives on earnings management. Nine of the 16 interviewees stated that they know the term *earnings management*. Interestingly, they defined earnings management as other terms. The interviewee from the professional regulator in Malaysia defined earnings management as managing the books. His statement was:

> *"I would say it's talking about what we call "managing the books". There is one term I cannot remember. "Window dressing". Something likes window dressing. But not so much like window dressing. Accounts manipulation. Something likes accounting manipulation. There is one term for it I can't remember…"* (The interviewee from professional regulator in Malaysia).

The interviewee from the professional regulator, the interviewee from non-listed state-owned organisation and the interviewee from one local audit firm in Thailand saw earnings management as cooking the books. One of them said that:

> *"Yes. Cooking the books. Why haven't I heard it before? It is the attempt to make reported numbers look better than what they actually are, to make them different from*

their fact, to smooth earnings, to make a big increase in earnings and so forth…" (The audit partner from one local audit firm in Thailand).

The interviewee from the independent regulator in Singapore and the audit partner from one of the big 4 audit firms in Malaysia defined earnings management as an activity that helps a company to achieve its shareholders' satisfactions. One of them expressed her sentiment that:

> *"Well, I mean basically in my personal understanding is that it is really to be able to manage your shareholders' expectations."* (The interviewee from the independent audit regulator in Singapore).

The interviewee from one of mid-tier audit firms in Malaysia saw earnings management as one form of accounting manipulations. He gave his view that:

> *"...We would look at earnings management as a form of manipulating your financial statements in such a way that the management achieves what we call a profit target or an earnings target..."* (The interviewee from the principal and development team of mid-tier audit firm XXA in Malaysia).

The interviewee from one listed company in Thailand, which employed one of big 4 audit firms, understood that earnings management is creative accounting. He said that:

> *"Does it mean "creative accounting"?"* (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ);

According to the view of the academic from Singapore, earnings management is an activity that a company uses to fudge financial information. His statement was:

> *"...Earnings management is about fudging the earnings number for whatever purposes. Sometimes it could be for smoothing purposes to make it look less erratic and volatile. Sometimes they are basically managed to achieve certain performance targets. Sometimes they are managed to avoid certain punishments like a technical breach of the debt covenants. So that means they are basically fudging the earnings number for whatever other purposes. I think that is earnings management..."* (The academic from Singapore)

Interestingly, seven of the 16 interviewees accepted that they have not heard the term *earnings management* before. Four of the seven interviewees are from audit firm, two audit partners from the same mid-tier audit firm in Thailand and Malaysia, one audit

partner from one of the mid-tier audit firms in Malaysia and one audit partner from one of the big 4 audit firms in Singapore.

Two of the above seven interviewees are the interviewee from the securities regulator in Thailand and the interviewee from one listed company in Thailand which employed the local audit firm. One of the above seven interviewees is the interviewee from one listed company in Malaysia, which employed one of the big 4 audit firms. Their statements were, for example:

> *"Earnings management not exactly the term I know."* (The audit partner from big 4 audit firm XXY in Singapore) and

> *"To be fair, I have not heard but looking at that word itself."* (The audit partner from mid-tier audit firm XXB in Malaysia).

Interestingly, the term *earnings management* is unfamiliar to some key stakeholders of the audits in Southeast Asia, even the regulators and the audit firms. Earnings management is seen as other terms, i.e. window dressing, cooking the books, financial statements manipulation, creative accounting, managing shareholders' expectation and fudging the earnings numbers. According to their definitions, it raises doubt as to whether earnings management, fraud and error are different and this is discussed in the next section.

8.7.1 DOES EARNINGS MANAGEMENT DIFFER FROM FRUAD AND ERROR?

To distinguish earnings management and fraud from error, intention is the key factor that is used by the interviewee from one listed company in Thailand, which employed one of the big 4 audit firms, the interviewee from one listed company in Thailand, which employed the local audit firm, and the audit partner from one of the big 4 audit firms in Malaysia. They explained that error is unintentional but earnings management and fraud are not. Two of them gave their points of view that:

> *"I think we classify them based on intention of what one does. Intention to commit fraud is to take advantage of company. Error maybe occurs without intention and the company can either gain or lose benefit from it. Earnings management is done by intention allowed by GAAP..."* (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ) and

> *"we have to look at the intention. Intention is very important. If you don't have intention to cause any damage to your company, I think it's fine... It is like we are moving as a circle; the intention becomes the motivation for doing that. If you have bad intentions, it is like we are going straight...it is the deception..."* (The interviewee from one listed company in Thailand, which employed a local audit firm).

The audit partner from one of the big 4 audit firms in Singapore shared his opinion that the use of judgement in financial reporting leads a company to have a room for earnings management. He stated that:

> *"... accounting is not really black and white, accounting has much judgemental area.."*
> (The audit partner from big 4 audit firm XXY in Singapore).

The audit partner from one mid-tier audit firm in Malaysia and the academic from Singapore agreed that earnings management is done by grey accounting areas. One of them pointed out that:

> *"Earnings management is an accounting manipulation within GAAP. Some accounting treatments are in the grey area. Whether they are right or wrong depends on our judgements..."* (The audit partner from mid-tier audit firm XXC in Malaysia).

According to the interviewee from one non-listed state-owned organisation in Thailand which employed the office of auditor general and has two listed subsidiaries, earnings management is:

> *"... the use of gap in accounting standards."* (The interviewee from one non-listed state-owned organisation in Thailand which employed the office of auditor general and has two listed subsidiaries).

From these views of the interviewees, it can be deduced that earnings management occurs when one works around accounting judgements, loopholes in GAAP and grey accounting areas. However, there is still no fixed fine line between earnings management and fraud. They seem to be very close. The interviewees used different criteria for defining the difference between earnings management and fraud. Firstly, they used accounting standards. The academic from Singapore believed that fraud or misrepresentation is one form of earnings management. Fraud or misrepresentation breaches accounting standards. Therefore, earnings management is not always fraud. He explained that:

> *"... fraud, materiality misrepresentation, all these are part and parcel of earnings management per se. You see earnings management doesn't have to be fraud. Fraud is only one dimension of earnings management. Earnings management you can think of it,*

at the end of the day, as earnings changes because of management's intervention. And the management's intervention could be fraudulent, could be clear misrepresentation, or just accounting judgement as it does. So that means you can think of the management sanction as a spectrum ranging from illegal which is fraud to those that are allowable under the accounting standards. That is still earnings management..." (The academic from Singapore).

The audit partner from one of the big 4 audit firms in Singapore and the interviewee from the professional regulator in Thailand expressed the same sentiment that earnings management is what is allowed by accounting standards. Their points of view were:

"Because they are judgemental area, it allows the company to make certain judgement and for the company move within certain limit. Because of that will create room for as you call earnings management, which is within the framework. You can be aggressive if you won't within the framework. But it's different from fraud or misstatements. Because fraud and misstatements is totally wrong but these are this is actually not wrong. But it's just that you are allowed to exercise judgement within the framework. And accounting principle allows that..." (The audit partner from big 4 audit firm XXY in Singapore) and

"...earnings management is done by using what is permitted by accounting standards. It delays or accelerates the recognition of some accounting items in order to report companies' performances that you want..." (The interviewee from the professional regulator in Thailand).

Secondly, the interviewees from listed companies used intention as the key criterion for distinguishing earnings management from fraud. The interviewee from one listed company in Thailand, which employed one local audit firm, pointed out that earnings management is done with intention to safeguard all stakeholders' benefits. He expressed his opinion that:

"To me, it is what we do in order to make everything win-win for everyone. We have many stakeholders..." (The interviewee from one listed company in Thailand, which employed a local audit firm).

The interviewee from one listed company in Thailand, which employed one of big 4 audit firms believed that fraud is an illegal activity but earnings manage is not. However, the company's intention of engaging in earnings management can lead to good and bad consequences. He said that:

> *"Fraud is definitely illegal. Whether earnings management leads to a negative or positive impact depends on organisation's aim."* (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ).

Interestingly, the interviewee from one listed companies in Malaysia, which employed one of the big 4 audit firms, viewed earnings management as similar to tax planning. It can be bad or good earnings management. Good earnings management aims to serve company's and investors' benefits. Her explanation was:

> *"...Earnings management is similar to tax planning that can be seen as tax evasion and tax avoidance. Earnings management then can be a healthy management or an unhealthy management. Healthy management is for the benefits of investors and a company; therefore, it is a good practice. For example, we can use accounting treatment that complies with GAAP in order to keep trend of earnings or smoothing incomes. This is to stabilise the stock price..."* (The interviewee from one listed company in Malaysia, which employed big 4 audit firm XXV).

She also highlighted that her company's audit committee could help the company stop bad earnings management. She pointed out that:

> *"..the company's audit committee also reviews all judgement areas in accounting. This helps prevent any unhealthy earnings management..."* The interviewee from one listed company in Malaysia, which employed big 4 audit firm XXV).

The opinion of the interviewee from the professional regulator in Malaysia is similar to those of the interviewees from listed companies. Earnings management is not related to dishonesty. He said that:

> *"... Dishonesty is something different. Dishonesty is really directors taking money out of the system, put in fraudulent transaction, for personal gain. I think that's very much related to fraud than earnings management..."* (The interviewee from the professional regulator in Malaysia).

However, he also added that many cases of fraud stems from earnings management. He stated that:

> *"So if you talk about earnings management, I believe earnings management will lead to fraud. A lot of times fraud happens are because of earnings management..."* (The interviewee from the professional regulator in Malaysia).

Interestingly, two interviewees from Thailand accepted that their companies engaged in some kinds of earnings management. They are the interviewee from one non-listed state-owned organisation and the interviewee from one listed company in Thailand which employed one of the big 4 audit firms. They pointed to the fact that:

> *"...We do some creative accounting. Some situations at the time that we make decision on selecting accounting treatments may indicate which one is applicable for us. As time goes by and circumstances change, those accounting practices may not be appropriate anymore. Sometimes we adopted accounting practices, which may not be consistent with the substance of the transactions..."* (The interviewee from one listed company in Thailand, which employed big 4 audit firm XXZ) and

> *"We move something from one quarter into other quarter. I think it is acceptable because year-ended financial statements are still correct...Sometimes situations force us to do that... It is because thing is behind the schedule and we have to meet our monthly forecast. Otherwise we have to be asked by the audit committee for the deviation from the forecast. We don't have intention to manage reported revenue or profit in order to make change in a price of our products or services or in a remittance that we have pay to the government"* (The interview from non-listed state-owned organisation in Thailand which employed the office of auditor general and has two listed subsidiaries).

The interviewee from the independent regulator from Singapore also believed that earnings management appears to be general practice among listed companies. She stated that:

> *"...I think everybody; every company would have some form of earnings management..."*
> (The interviewee from the independent regulator in Singapore).

As discussed earlier, a fixed fine line between earnings management and fraud remains unclear. Nonetheless, GAAP, laws, regulations and intention are considered by the interviewees to be key criteria to define whether an activity is earnings management or fraud. Activity that breaches GAAP, laws or regulations or that is done dishonestly is defined by the interviewees as fraud. Interestingly, the audit committee is expected to help prevent all stakeholders from bad earnings management. Since earnings management and fraud are deemed very close, it raises the question of the auditor's responsibility for detecting earnings management. This question is discussed in the following section.

8.7.2 IS AN AUDITOR EXPECTED TO DETECT EARNINGS MANAGEMENT?

Four interviewees from the regulatory bodies and the academic were asked whether auditors are responsible for detecting earnings management. Two interviewees from Thailand agreed that the auditors have that responsibility. One of them gave the view that if an auditor is responsible for testing the reasonableness of a company's accounting policies, it is implied that the auditor also has responsibility for detecting earnings management. His sentiment was that:

> *"...Although earnings management may be defined by some people as the accounting treatments allowed by GAAP that help management report favourite accounting numbers. One responsibility of auditors is to assess the reasonableness of accounting policies selected by management. Auditors are objective third parties who check whether management biases the presentation of financial statements and whether the accounting policies are appropriate to company's circumstances..."* (The interviewee from the securities audit regulator in Thailand).

The interviewee from the professional regulator in Malaysia shared the similar views with those two from Thailand. He pointed out that since earnings management leads financial information to be incorrect, the auditor is also responsible for detecting earnings management. His statement was:

> *"...earnings management is not something which is acceptable. If you talk about audit quality, audit quality also, like I said, comprises of adequate, accurate information. And if you have earnings management, then the information reported in the financial statements will not be accurate. So the auditor's responsibility is then, I am not saying all, a part of auditor's responsibility then is to detect earnings management..."* (The interviewee from the professional regulator in Malaysia).

However the interviewee from the independent regulator from Singapore believed that as long as it is not an auditor's responsibility to detect fraud, the auditor is not primarily responsible for detecting earnings management. She expressed her sentiment that:

> *"..Same like if the auditor are not responsible for detecting fraud, then I don't see the auditors as having a responsibility to detect earnings management. But I think insofar as the auditors' duty is concerned, the auditors ought to be able to highlight areas whereby the company has obviously not complied with certain laws and regulation or even accounting standards..."* (The interviewee from independent audit regulator in Singapore).

In addition the academic from Singapore raised the point that detecting earnings management could be a difficult task for auditors unless there is clear evidence. He said that:

> *"I think...it is very hard...the only thing the auditors can do is to say whether those estimates, those judgements by the management are reasonable. That's about all they can say. Unless there is very clear evidence that they are fraudulent, they are illegal, then the auditor can make further statements. Remember in the standard auditing framework, it is very well said that the auditors are not responsible in discovering fraud...that's not their job... is it? They are not hound dogs...they are not people sniffing around looking for fraud...they're looking for whether the numbers fairly, truthfully represent the economic activities. That's about all they're trying to do. And a large part of it is judgement..."* (The academic from Singapore).

According to the views of the regulators and academic, there is still a lack of a general agreement that auditor has responsibility for detecting earnings management. Later section discusses the perspectives of the interviewees from the audit firms on an auditor's responsibility of detecting earnings management.

8.7.3 DO AUDIT FIRMS HAVE SPECIFIC AUDIT METHODOLOGIES FOR DETECTING EARNINGS MANAGEMENT?

All seven interviewees from the audit firms were asked whether their audit firms develop specific audit methodologies for detecting earnings management. All these interviewees stated that their existing audit methodologies are able to detect earnings management. Therefore, there is no need to develop any specific methodology for that purpose. For example, the interviewee from one mid-tier audit firm in Malaysia revealed that his firm used analytical procedures performed by the audit partner to detected earnings management. He provided the fact that:

> *"...Our audit approach requires us to do at least certain key ratio analyses. So a ratio analysis forms a part of BBB (the name of audit programme), as we call it, substantive analytical procedures or under ISAs they just call it "analytical procedures". So we believe that test of controls is not gonna help you. We believe doing substantive testing is not going to help you. So the only way therefore an auditor to detect earnings management in our audit approach is defined through BBB or analytical procedures and the primary weapon that we use is gonna be ratio analyses...the requirement for earnings management ratio analyses as a weapon is actually to be done by the audit*

partner, the most experienced person in audit engagement team..." (The interviewee from the principal and development team of mid-tier audit firm XXA in Malaysia).

On the other hand, the audit partner from one of the big 4 audit firms in Singapore explained that, to detect earning management, his firm would pay more attention to the key management judgements and estimations. His statement was:

> *"...Earnings management normally relates to, as I said, the exercise of judgement. So we actually...do the audit we actually look at what are the key judgements, key management judgements, key management estimates. Once we identify the key management judgements, key management estimates, we will apply more rigorous audit techniques to audit these few areas..."* (The audit partner from big 4 audit firm XXY in Singapore).

Whist the audit partner from one local audit firm in Thailand believed that focusing on unusual transactions or items helps his firm limit earnings management. He said that:

> *"...No, we don't have. We just pay more attention to unusual items or transactions. It is generally standard audit work..."* (The audit partner from one local audit firm in Thailand).

Evidence from the interviews indicates that audit firms' existing audit methodologies (i.e. analytical procedure, test of key management judgements and estimation and careful scrutiny of unusual transactions or items) are effective in detecting earnings management.

8.7.4 DISCUSSION

To summarise here, the term *earnings management* is less familiar to some key stakeholders of the audits in Southeast Asia. Importantly, there remains a lack of consensus on earnings management. Figure 13 below presents the perspectives on earnings management which is based on the results of the interviews. Error is done without intention; on the other hand, earnings management and fraud are done with intention. Earnings management and fraud occur when one works around accounting judgements, grey accounting areas and loopholes in GAAP. Therefore, earnings management and fraud might be defined as creative accounting, cooking the books and manipulating financial statements.

Figure 13: Perspectives on Earnings Management
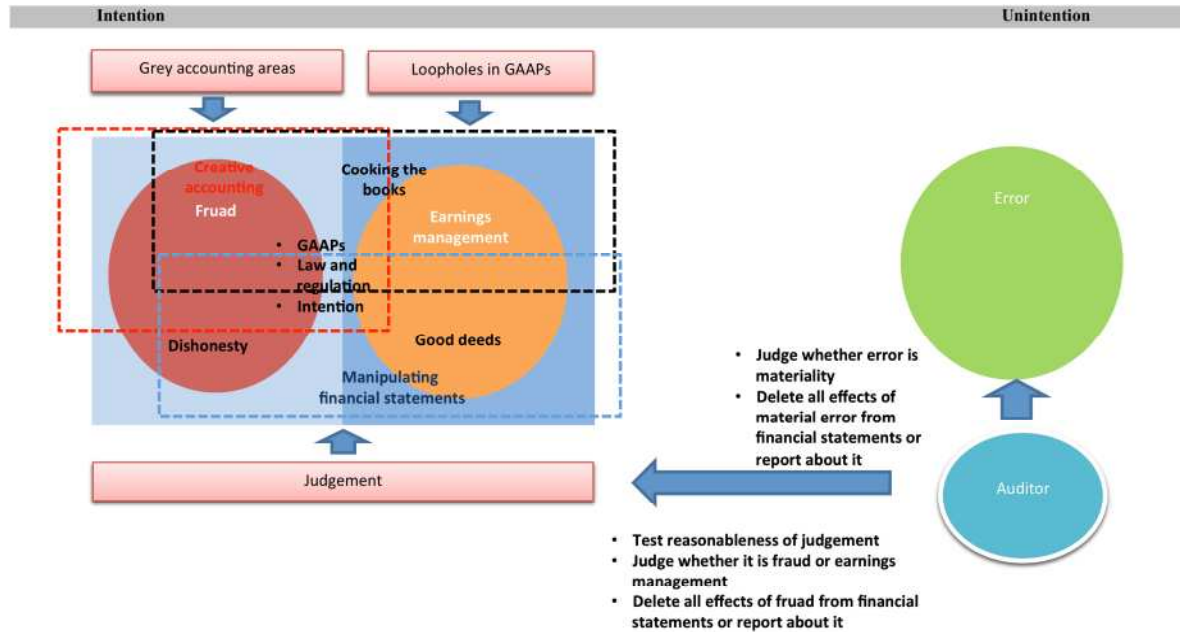
From the interviewees' perspectives on earnings management, earnings management can be defined as an activity that is done in compliance with GAAP, laws and regulations and with the honest intention of safeguarding the stakeholders' interests. If not, such activity is defined as fraud, which requires an auditor to take further action. Auditors are required by the accounting standards to test the reasonableness of the management's judgements and estimations in significant accounting areas; therefore, the auditors possibly detect either earnings management or fraud. However, without clear evidence, it is difficult for the auditors to make a judgement about whether an activity is earnings management or fraud. Interestingly, audited companies' audit committees are perceived to be one gatekeeper to helping to limit earnings management. Audit firms themselves are confident that their existing audit methodologies are able to detect earnings management.

8.8 CONCLUSION

Chapter 8 reported the results of 16 semi-structured interviews in Malaysia, Singapore and Thailand. The interviews provided evidence that different roles in the audit process lead the interviewees to see audit quality differently and also to have different measures of audit quality. From the interviewees' views on audit quality, this thesis defines audit quality as an audit that complies with generally accepted auditing standards and helps an auditor deliver value added benefits to an audited entity. It also provides the public with a reliable audit report and a credible set of financial statements that presents an audited company's

financial position and performance. This definition of audit quality appears to be a subjective concept which is difficult to measure. Only audit firm inspection performed by an independent regulator seems to be less invisible and subjective measure of audit quality in comparison to other measures of audit quality identified by the interviewees.

Apart from firm and national level factors in promoting audit quality that were generally identified by previous studies, the interviews in thesis provided evidence that, in Southeast Asia, the audit fee is also a key factor in promoting audit quality at a firm level. To promote audit quality at a national level, the interviewees pointed to the importance of audit firm inspection, the implementation of ISQC1 and a legal accounting Act. They also raised key constraints on the promotion of audit quality at a national level. These constraints are the translation of the international standards from English into other languages and the limited number of registrant audit firms. Even though the interviews did not give clear evidence that long audit firm tenure impairs audit quality, there is a belief that, in comparison to policy on audit firm rotation, the existing policy on audit partner/team rotation is more effective in addressing the independence threat that may arise from long audit firm tenure.

From the interviews, it appears that, in Southeast Asia, big firms are perceived to have higher quality than non-big firms because the interviewees see the big firms as having more resources. However, a mid-tier audit firm in Malaysia sees itself as having the same level of audit quality as a big 4 audit firm in Malaysia. This raises doubt as to whether the classification of audit firms just into a big 4 auditor and a non-big 4 auditor is still valid. The results of the interviews also indicate that there may be differences in level of competences and audit qualities within a big firm group in one country and in different countries.

Interestingly, earnings management is less known in Southeast Asia. The understandings of earnings management among the interviewees remain unclear and vary from interviewee to interviewee. From the interviewees' views on earnings management, this thesis defines earnings management as an activity that is done in compliance with GAAP, laws and regulations and with the honest intention to safeguard the stakeholders' interests. This thesis's definition of earnings management seems to present the good side of earnings management. This raises doubt that changes in the accounting environment, especially the

prominent role of an audit committee in promoting good corporate governance, might lead to positive views on earnings management.

The inferences from the interviews here must be taken with caution due to the following limitations. Firstly, this thesis aims to provide comparative evidence of Indonesia, Malaysia, the Philippines, Singapore and Thailand. However, as the result of the cluster of these countries in Chapter 7, the interviews were conducted only in Malaysia, Singapore and Thailand. Thailand is selected as the representative of Indonesia and the Philippines. Owing to the differences in accounting environments and macroeconomic factors, the interviewees from the Philippines and Indonesia may have different perspectives on earnings management and audit quality from those in Thailand and even Indonesia and Malaysia.

Secondly, the interviewer was unable to interview with all interviewees within the same category from different countries. Therefore, it is difficult to compare the views within each category of interviewees. For example, for the views of listed companies which employed a big 4 audit firm, there was one interviewee from Thailand and one from Malaysia. For the views of academics, there was only one interviewee from Singapore.

Thirdly, the interviewees might bias the answers of interview questions. For example, all audit firms agreed that there is no need to impose the requirement of periodic audit firm rotation. They believed that their policies on audit partner/team rotation effectively address the issue that long audit tenure could pose the threat to audit independence and impair audit quality. This may be because they worry about the impact of the policy on mandatory audit firm rotation. If they support the policy and the policy is imposed, they could lose their existing clients. In addition, the interviewees from mid-tier audit firms would always see themselves as no different from the big 4 audit firms, whilst the interviewees from big audit firms would always see themselves as outperforming other audit firms.

To validate the interviewees' perceptions that language of the accounting standards, the establishment of an independent audit regulator, a number of registrant audit firms, a legal accounting Act and ISQC1 influence audit quality, five variables of these factors are introduced into the probit models as designed in the methodology chapter. The results of the validation are reported in the next chapter.

CHAPTER 9

WHAT INFLUENCES AUDIT QUALITY?

9.1 INTRODUCTION

Chapter 7 quantitatively tested the influence of audit firm type and investor protection on audit quality. The results of the test supported a general notion that big firms are of higher quality than non-big firms. Importantly, the test also provided evidence that there may be other national level factors influencing audit quality. These factors may cause audit firms from Malaysia to be the most flexible since they are the most tolerant of discretionary accruals. On the other hand, these factors may lead the audit firms from Indonesia, the Philippines and Thailand to be less flexible. The benchmark of this comparison was the audit firms from Singapore, which has strongest investor protection.

Chapter 8 explored the perspectives of some key stakeholders of the audits on earnings management and audit quality by conducting 16 semi-structured interviews. Many firm and national level factors in promoting audit quality were identified by the interviewees. In this chapter, some of the factors that were raised by the interviewees but not tested for in Chapter 7 are now included in the model. The language of the accounting standards, the establishment of an independent audit regulator, the number of registrant audit firms, an accounting Act and ISQC1 are the factors chosen for further analysis. This is because previous studies have not tested the influences of these factors on audit quality as yet, especially in the context of a multinational comparison. The same data set as used in Chapter 7 is used again. However, only firm-year observations that are from the period 2000 to 2011 are selected. This is to observe changes in these factors that might impact on audit quality. The final sample is 17,758 firm-year observations.

The results of the tests are reported as follows. Section 9.2 presents the results of the main tests which cover univariate, correlation, and multivariate tests. Section 9.3 shows the results of the robustness check that introduces other interested variables into the probit model. Section 9.4 provides the conclusion.

9.2 EMPIRICAL RESULTS

The empirical results in this section are reported as follows. Section 9.2.1 reports the descriptive statistics of the observations. Section 9.2.2 shows the results of the test of the difference in mean DA, $|DA|$ and $AudOpi$ and the test of difference in median DA, $|DA|$ and $AudOpi$ between each pair of groups of the observations. In section 9.2.2, the observations are clustered according to five variables of factors. These five variables were seen by the interviewees in Chapter 8 as influencing audit quality at a national level and chosen by this thesis for further testing their influences on audit quality at a national level. Section 9.2.2 also presents the results of further test of the correlation between each institutional variable and DA, $|DA|$ or $AudOpi$. Section 9.2.3 reports the results of the probit models that are introduced the chosen factors.

9.2.1 DESCRIPTIVE STATISTICS

Table 15 below represents the characteristics of 17,758 observations that are selected for the further analysis in this chapter. In this chapter, we do not remove any accruals outlier because we already removed them in Chapter 7.

Table 15: Descriptive Statistics (n=17,758)

	Mean	Std. Dev.	Min	25th	Median	75th	Max
DA	0.000	0.152	-3.166	-1.893	0.001	0.052	3.476
|DA|	0.086	0.125	0.000	0.000	0.053	0.105	3.476
ChangeAud	0.103	0.304	0	0	0	0	1
AudOpi	0.921	0.270	0	0	1	1	1
Tenure	5.364	3.517	1	1	5	7	20
ROA	-0.534	111.378	-11,247.700	-3585.130	3.770	8.190	503.170
DtoE	1.268	76.338	-153.300	-105.470	0.110	0.450	9,884.520
natTA	20.603	2.984	9.470	12.790	19.940	21.710	32.360
InvPro	0.626	0.483	0	0	1	1	1
DummyAud	0.254	0.436	0	0	0	1	1
EngLsh	0.687	0.464	0	0	1	1	1
InspecAF	0.269	0.443	0	0	0	1	1
List to AuFirm	0.577	0.493	0	0	1	1	1
AccAct	0.741	0.438	0	0	1	1	1
ISQC1	0.051	0.221	0	0	0	0	1

Note: *DA* is discretionary accruals scaled by lagged total assets; |DA| is absolute value of discretionary accruals; *ChangeAud* is a dummy variable and is equal to 1 if the observations switch auditor type, 0 otherwise; *AudOpi* is a dummy variable and is equal to 1 if the audit opinion is an unqualified opinion, 0 otherwise; *Tenure* is the number of consecutive years for which audit firms within the same group were employed as the company's auditor; *ROA* is return-on-assets ratio; *DtoE* is debt-to-equity ratio; *natTA* is natural logarithm of total assets (USD); *InvPro* is Leuz et al.'s (2003) level of investor protection and is a dummy variable which is equal to 1 if that country is defined as a high investor protection country, 0 otherwise; *DummyAud* is a dummy variable that is equal to 1 if firm i was audited by a big firm in year t and 0 otherwise; *EngLsh* is a dummy variable that is equal to 1 if the language of country p's accounting standards is English and 0 otherwise; *InspecAF* is a dummy variable that is equal to 1 if country p's independent regulator who takes responsibility to conduct audit firm inspections exists in year t and 0 otherwise; *List to AuFirm* is a dummy variable that is equal to 1 if the average of country p's proportion of listed companies to registrant audit firms in year t is less than 5:1 and 0 otherwise: the proportion is computed as $\frac{number\ of\ listed\ companies_t}{number\ of\ registrant\ audit\ firms_t}$; *AccAct* is a dummy variable that is equal to 1 if country p's accounting Act is effective in year t and 0 otherwise; and *ISQC1* is a dummy variable that is equal to 1 if country p's ISQC1 is effective in year t and 0 otherwise.

Table 15 provides evidence that listed companies in Southeast Asia report discretionary accruals at approximately 8.60% of lagged total assets during the period from 2000-2011. They rarely change an audit between types of audit big/non-big firm and generally receive clean audit reports. Their audit firm type tenure is approximately 5 years. They have a wide range of performance, leverage and size. Most of them are audited by non-big firms and are from countries with English accounting standards or with a common law system. Most of observations are from periods when ISQC1, an accounting Act or an independent audit regulator did not exist.

9.2.2 UNIVARIATE TESTS

To future identify the influences of the chosen factors on audit quality, this section begins with the test of the difference in mean DA, $|DA|$ and $AudOpi$ and the test of difference in median DA, $|DA|$ and $AudOpi$ between each pair of groups of the observations. The

interpretations of the test of the difference in mean DA, $|DA|$ and $AudOpi$ and the test of difference in median DA, $|DA|$ and $AudOpi$ are done together with the interpretations of the test of correlations between each pair of variables. This would help the author identify how DA, $|DA|$ or $AudOpi$ are associated with the chosen factors and how the chosen factors jointly influence audit quality. As discretionary accruals are computed as a percentage of lagged total assets, it may be the case that the test reports the statistical significance but the numerical value of discretionary accruals may not be materially different. Therefore, the author also considers the materiality of the difference.

This section preliminarily observes the direction and the level of discretionary accruals and audit firms' issuances of audit reports in different accounting environments that this chapter chooses for further analysis. These different accounting environments were summarised in Table 2 on Page 31. The results of the observation of the difference in mean DA, $|DA|$ and $AudOpi$ and the test of difference in median DA, $|DA|$ and $AudOpi$ are presented in Table 16 on Page 267.

Table 17 on Page 270 reports the observation of the correlations between each pair of variables. It focuses primarily on institutional variables, reported discretionary accruals and audit opinion. Similarly to the tests of the correlations among variables in Chapter 7, the upper half is the Spearman correlation coefficients (r_s) and the lower half is the Pearson correlation coefficients (r_p). The analyses of both r_s and r_p help reduce misspecification of the correlation when only one method is selected. The relationships among variables are identified if both p-value of r_s and r_p are significant at p-value 0.01, except for r_p of the correlation between DA and LegalSys and for r_s of the correlation between |DA| and ISQC1 which are significant at p-values 0.05 and 0.1, respectively.

Table 16: **Comparison of Reported Discretionary Accruals and Audit Opinion by Institutional Variables (n=17,758)**

A: Comparison of DA, |DA| and AudOpi by insitutional variables (n=17,758)

	English (n=12,208)					Non-English (n=5,550)					T-test for differences in mean		Wilcoxon z-test for differences in median	
	Mean	Median	Std. Dev.	Min	Max	Mean	Median	Std. Dev.	Min	Max	P-value	Ha	P-value	Probability
DA	-0.001	0.000	0.155	-3.166	3.476	0.002	0.006	0.144	-1.197	3.260	0.252	a=b	0.260	
|DA|	0.087	0.054	0.129	0.000	3.476	0.085	0.053	0.117	0.000	3.260	0.271	a=b	0.303	
AudOpi	0.961	1.000	0.193	0.000	1.000	0.832	1.000	0.374	0.000	1.000	0.000***	a>b	0.000***	0.564
	Existence of an independent audit regulator (n=4,757)					Lack of an independent audit regulator (n=13,001)					T-test for differences in mean		Wilcoxon z-test for differences in median	
	Mean	Median	Std. Dev.	Min	Max	Mean	Median	Std. Dev.	Min	Max	P-value	Ha	P-value	Probability
DA	-0.001	-0.001	0.168	-1.893	3.476	0.000	0.001	0.145	-3.166	3.260	0.681	a=b	0.020**	0.489
|DA|	0.095	0.059	0.139	0.000	3.476	0.083	0.052	0.119	0.000	3.260	0.000***	a>b	0.000***	0.533
AudOpi	0.989	1.000	0.105	0.000	1.000	0.896	1.000	0.305	0.000	1.000	0.000***	a>b	0.000***	0.546
	Low proportion of listed companies to registrant audit firms (n=10,255)					High proportion of listed companies to registrant audit firms (n=7,503)					T-test for differences in mean		Wilcoxon z-test for differences in median	
	Mean	Median	Std. Dev.	Min	Max	Mean	Median	Std. Dev.	Min	Max	P-value	Ha	P-value	Probability
DA	0.006	0.002	0.132	-3.166	2.062	-0.008	-0.001	0.175	-2.140	3.476	0.577	a=b	0.008***	0.512
|DA|	0.079	0.050	0.106	0.000	3.166	0.096	0.060	0.146	0.000	3.476	0.000***	a<b	0.000***	0.457
AudOpi	0.938	1.000	0.242	0.000	1.000	0.898	1.000	0.303	0.000	1.000	0.000***	a>b	0.000***	0.520
	Existence of an accounting Act (n=13,166)					Lack of an accounting Act (n=4,592)					T-test for differences in mean		Wilcoxon z-test for differences in median	
	Mean	Median	Std. Dev.	Min	Max	Mean	Median	Std. Dev.	Min	Max	P-value	Ha	P-value	Probability
DA	0.001	0.002	0.150	-3.166	3.476	-0.004	-0.003	0.158	-1.405	3.260	0.025**	a>b	0.008***	0.517
|DA|	0.084	0.052	0.124	0.000	3.476	0.092	0.058	0.128	0.000	3.260	0.000***	a<b	0.000***	0.474
AudOpi	0.948	1.000	0.223	0.000	1.000	0.844	1.000	0.363	0.000	1.000	0.000***	a>b	0.000***	0.552

Table 16: **Comparison of Reported Discretionary Accruals and Audit Opinion by Institutional Variables (n=17,758) (continued)**

A: Comparison of DA, |DA| and AudOpi by insitutional variables (n=17,758)

	Adoption of ISQC1 (n=919)					Non-adoption of ISQC1 (n=16,839)					T-test for differences in mean		Wilcoxon z-test for differences in median	
	Mean	Median	Std. Dev.	Min	Max	Mean	Median	Std. Dev.	Min	Max	P-value	Ha	P-value	Probability
DA	0.010	-0.003	0.240	-1.893	3.476	-0.001	0.001	0.146	-3.166	2.603	0.206	a=b	0.236	
|DA|	0.103	0.057	0.217	0.000	3.476	0.085	0.053	0.118	0.000	3.166	0.006***	a>b	0.081	
AudOpi	0.999	1.000	0.033	0.000	1.000	0.917	1.000	0.276	0.000	1.000	0.000***	a>b	0.000***	0.541

B: Summary of sample selection

	Obs
Indonesia	1,917
Malaysia	6,622
Philippines	1,088
Singapore	4,498
Thailand	3,633
Total	**17,758**

C: Average of proportion of listed companies to registrant audit firms

Indonesia	2	listed companies per one registrant audit firm
Malaysia	12	
Philippines	2	
Singapore	1	
Thailand	17	

Table 16: **Comparison of Reported Discretionary Accruals and Audit Opinion by Institutional Variables (n=17,758) (continued)**

Note: Variable definitions: *DA* is discretionary accruals scaled by lagged total assets; |DA| is the absolute value of discretionary accruals; and *AudOpi* is a dummy variable and is equal to 1 if the audit opinion is an unqualified opinion and 0 otherwise.

Parametric *t*-statistics given here are from two-sample *t*-tests with equal variance if the assumption that observations in group a and those in group b have a similar variance of each variable is satisfied. If not, two-sample *t*-test statistics with unequal variance are chosen. The tests are based on diff=mean (a)-mean (b) and H0: diff=0. The acceptance of H0 (Ha: diff≠0) means that there is no difference of means between groups. The rejection of H0 (Ha: diff≠0) however indicates that there is the difference of means between groups, and then Ha: diff>0 or Ha: Diff<0 are tested. Nonparametric Wilconxon z-statistics for test of differences in medians between groups are two-sample Wilcoxon rank-sum (Mann-Whitney) tests. H0 is that there is no difference of median between groups. P [variable (a)>variable (b)] is the probability that the median of variable for group a is greater than median of variable for group b.

The number of listed companies, which is used to compute the proportion of listed companies to registrant audit firms, is collected from http://www.world-exchanges.org/statistics/annual/2007/number-listed-companies except for 2011 that are collected from the stock exchange website of each country. Owing to the limitation that historical data of the number of registrant audit firms is unavailable, the number of registrant audit firms in 2011 reported by ROSC are used as the denominator throughout 2000-2011, except for Singapore and Thailand.

Singapore's number of registrant audit firms is collected from ACRA's annual reports, which are available at http://www.acra.gov.sg/Publications/Annual_Reports/. Since ACRA was established in 2004, its number of registrant audit firms during the period from 2000 to 2003 is unavailable. The computation of the proportion for 2000-2003 is then based on the number of registrant audit firms in 2004.   Thailand's number of registrant audit firms was provided by the person from the Securities and Exchange Commission Thailand.

*, **, and *** indicate significance level of the difference at 0.10, 0.05, and 0.01 for a two-tailed test, respectively.

Table 17: Correlation Matrix of Institutional Variables, DA, |DA| and AudOpi (n=17,758)

n=17,758	DA	|DA|	AudOpi	EngLsh	InspecAF	List to AuFirm	AccAct	ISQC1
DA				-0.009	-0.017	0.020	0.025	-0.009
				0.026	0.020**	0.008***	0.008***	0.236
|DA|				0.008	0.050	-0.074	-0.040	0.013
				0.303	0.000***	0.000***	0.000***	0.081*
AudOpi				0.221	0.152	0.072	0.169	0.068
				0.000***	0.000***	0.000***	0.000***	0.000***
EngLsh	-0.008	0.008	0.221		0.297	-0.105	0.134	0.053
	0.264	0.288	0.000***		0.000***	0.000***	0.000***	0.000***
InspecAF	-0.003	0.043	0.152	0.297		-0.375	-0.027	0.212
	0.660	0.000***	0.000***	0.000***		0.000***	0.000***	0.000***
List to AuFirn	0.004	-0.070	0.072	-0.105	-0.375		0.690	-0.027
	0.561	0.000***	0.000***	0.000***	0.000***		0.000***	0.000***
AccAct	0.015	-0.026	0.169	0.134	-0.027	0.690		
	0.045**	0.000***	0.000***	0.000***	0.000***	0.000***		
ISQC1	0.015	0.032	0.068	0.053	0.212	-0.273	0.027	
	0.049**	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	

Note: Variable definitions: *DA* is discretionary accruals scaled by lagged total assets; *|DA|* is absolute value of discretionary accruals; *AudOpi* is a dummy variable that is equal to 1 if the audit opinion is an unqualified opinion and 0 otherwise; *EngLsh* is a dummy variable that is equal to 1 if the language of country p's accounting standards is English and 0 otherwise; *InspecAF* is a dummy variable that is equal to 1 if country p's independent regulator who takes responsibility to conduct audit firm inspections exists in year t and 0 otherwise; *List to AuFirm* is a dummy variable that is equal to 1 if the average of country p's proportion of listed companies to registrant audit firms in year t is less than 5:1 and 0 otherwise: the proportion is computed as $\frac{number\ of\ listed\ companies_t}{number\ of\ registrant\ audit\ firms_t}$; *AccAct* is a dummy variable that is equal to 1 if country p's accounting Act is effective in year t and 0 otherwise; and *ISQC1* is a dummy variable that is equal to 1 if country p's ISQC1 is effective in year t and 0 otherwise.

The upper half is the Spearman correlation coefficients and the lower half is the Pearson correlation coefficients. *, **, and *** indicate significant level of coefficient at 0.10, 0.05, and 0.01 for one-tailed test, respectively.

The results of the observations are discussed below.

9.2.2.1 DIRECTION OF EARNINGS MANAGEMENT (DA)

Median DA (p-value 0.05) of the observations from the periods after an independent audit regulator existed is significantly lesser than that from the periods before an independent audit regulator existed. Median DA is -0.1% of lagged total assets for the former group of the observations and +0.1% for the latter group of the observations. However, DA is found not to correlate with $InspecAF$. These contradictory findings indicate that there is still unclear evidence that the presence of an independent audit regulator impact the direction of earnings management.

Median DA (p-value 0.05) of the observations from countries with a low proportion of listed companies to registrant audit firms is greater than that from countries with a high proportion of listed companies to registrant audit firms. Their median DA is +0.2% whilst the other group is -0.1%. Interestingly, there is no correlation between DA and $List\ to\ AuFirm$. Therefore, there is also unclear evidence that a low proportion of listed companies to registrant audit firms influences the direction of earnings management.

Mean (p-value 0.05) and median DA (p-value 0.01) of the observations in the periods when an accounting Act was imposed are significantly greater that those in the periods before an accounting Act was imposed. On average, an audit firm reports DA by +0.1% (median = +0.2%) of lagged total assets after an accounting Act was imposed but -0.4% (-0.3%) before an accounting Act was imposed. In addition, a positive correlation between DA and $AccAct$ indicates that the observations' income-increasing earnings management after an accounting Act existed is approximately 1.5% or 2.5% of lagged total assets higher than that before an accounting Act existed. This provides interesting evidence that listed companies may engage in more income-increasing earnings management after an accounting Act existed. This evidence leaves doubt that the audit firms may be more tolerant of income-increasing earnings management after an accounting Act exists.

To summarise, the observation of DA is difficult for us to make inference about the difference in audit quality between groups of the observations since both income-increasing and income-decreasing earnings management are seen as impairing audit quality. However, this observation provides evidence that an accounting Act may be associated with more income-increasing earnings management.

9.2.2.2 LEVEL OF EARNINGS MANAGEMENT (|DA|)

As discussed earlier, this thesis's assumption of measuring audit quality is that the higher the level of discretionary accruals the audited financial statements with a clean audit report have, the lower the level of audit quality the audit firm has. Therefore, the observation of $|DA|$ preliminarily tests whether there is a difference in the levels of discretionary accruals between groups of the observations. This may help us capture the differences in earnings management behaviour and audit qualities between groups of the observations.

The observation of the difference in mean $|DA|$ and the difference in median $|DA|$ found that, unlike DA, the differences in mean and median $|DA|$ between groups of the observations are significant at p-value 0.01, except for the comparison of mean and median between the observations from countries with English/non-English standards and the comparison of median between the observations from the periods with/without the adoption of ISQC1. The observation of the correlation between each pair of variables reports that $|DA|$ has a positive correlation with $InspecAF$ and $ISQC1$ but a negative correlation with $List\ to\ AuFirm$ and $AccAct$.

Mean (median) $|DA|$ of the observations in the periods after an independent audit regulator was established is 9.5% (5.9%) of lagged total assets. However, mean (median) $|DA|$ of the observations in the periods before an independent audit regulator was established is 8.3% (5.2%). A positive correlation between $|DA|$ and $InspecAF$ also indicates that a level of discretionary accruals after an independent audit regulatory was established is approximately 4.3% or 5.0% higher than that before an independent audit regulatory was established. This is evidence that an audit firm may

be more tolerant of earnings management even when an independent audit regulator exists.

Mean $|DA|$ of the observations in the periods after ISQC1 was adopted is 10.3% of lagged total assets but mean $|DA|$ of the observations in the periods before ISQC1 was adopted is 8.5%. $|DA|$ also has a positive correlation with $ISQC1$. Their correlation indicates that the level of discretionary accruals after ISQC1 was adopted is approximately 1.3% or 3.2% higher than that before ISQC1 was adopted. This difference in the level of discretionary accruals before and after the adoption of ISQC1 seems not to be material. Hence, this leads the author to consider that the adoption of ISQC1 may not materially influence audit firms' tolerance to their audited companies' earnings management.

Mean (median) $|DA|$ of the observations from countries with a low proportion of listed companies to registrant audit firms or the observations in the periods after an accounting Act was imposed is lower than their counterparts. The average (median) $|DA|$ of the observations from countries with a low proportion of listed companies to registrant audit firms is 7.9% (5.0%); on the other hand, the average (median) $|DA|$ of the observations from countries with a high proportion of listed companies to registrant audit firms is 9.6% (6.0%). A negative correlation between $|DA|$ and $List\ to\ AuFirm$ also indicates that a level of discretionary accruals in a country with a low proportion of listed companies to registrant audit firms is approximately 7.0% or 7.4% lower than that in a country with a high proportion of listed companies to registrant audit firms. Therefore, this is evidence that audit firms from a country with a low proportion of listed companies to registrant audit firms may be less tolerant of earnings management.

After an accounting Act was imposed, mean (median) $|DA|$ is 8.4% (5.2%) whilst it is 9.2 % (5.8%) before an accounting Act was imposed. A negative correlation between $|DA|$ and $AccAct$ implies that the level of discretionary accruals in the periods after an accounting Act existed is approximately 2.6% or 4.0% lower than that in the periods before an accounting Act existed. This provides some evidence that audit

firms may be less tolerant of discretionary accruals after an accounting Act was imposed.

9.2.2.3 AUDIT OPINION

Observing a level of discretionary accruals in the previous section indicates that audit firms may be more tolerant of earnings management even when an independent audit regulator existed. However, they may be less when an accounting Act was imposed or when there is a low proportion of listed companies to registrant audit firms. Interestingly, the adoption of ISQC1 and the English/non-English accounting standards may not impact the audit firms' tolerance to their audited companies' earnings management.

This author also uses audit firms' issuances of an unqualified audit report to test the degree to which the audit firms are able to tolerate their clients' earnings management. Therefore, this section further observes the audit firms' issuances of an unqualified audit report. The observation of the difference in mean and the difference in median *AudOpi* in Table 14 above reports that, for all comparisons, mean and median *AudOpi* are significantly different at p-value 0.01. However, means and medians of a dummy variable *AudOpi* are close to 1 for all groups of the observations and are not materiality different between each pair of the groups of the observations. Therefore, the results of observations of the difference in mean and the difference in median *AudOpi* seem to be a less meaningful comparison.

Unlike the observations of the difference in mean and the difference in median *AudOpi*, the observation of the correlation between *AudOpi* and the chosen variables provides a more meaningful comparison. *AudOpi* has a positive correlation with all institutional variables chosen for this thesis's further analysis. The material positive correlations between *AudOpi* and *EngLsh*; between *AudOpi* and *InspecAF*; and between *AudOpi* and *AccAct* indicate that the audit firms from a country with the English accounting standards, those from the periods when an independent audit regulator existed or those from the periods after an accounting Act was imposed are more likely to issue unqualified audit reports. Their probabilities of issuing

unqualified audit reports are 22.1%, 15.2% and 16.9%, respectively, higher than their counterparts. On the other hand, the immaterial positive correlations between $AudOpi$ and $List\ to\ AuFirm$ (7.2%) and between $AudOpi$ and $ISQC1$ (6.8%) indicate that a low/high proportion of listed companies to registrant audit firms and a presence/absence of ISQC1 may weakly influence the audit firms' issuances of unqualified audit reports. From observation of the correlation between $AudOpi$ and the chosen variables, there is evidence that audit firms may find it easier to issue unqualified audit reports in the accounting environments where a country's accounting standards are in English, where an independent audit regulator existed or where an accounting Act was imposed.

Similarly to the findings of Haw et al. (2004) and Francis and Wang (2008), there are correlations amongst our institutional variables. Therefore, the interpretations of the results of the probit model in the next section should be done with caution. This is because the multicollinearity may lead the probit model not to give a valid result of an individual variable's influence on audit quality. For example, a positive correlation between $InspecAF$ and $ISQC1$ ($r_s = r_P = +0.212$) may lead the probit model to provide inaccurate the coefficients $InspecAF$ and $ISQC1$. Although these two variables may not influence our measure of audit quality, their positive correlation may lead the coefficients of $InspecAF$ and/or $ISQC1$ to have a statistical significance.

9.2.3 MULTIVARIATE TESTS

The univariate tests in Section 9.2.2 above provided evidence that audit firms may be more tolerant of earnings management and more likely to issue unqualified audit reports after an independent audit regulator existed. Therefore, the author considers that audit quality may be impaired even after an independent audit regulator existed. However, there remains contradictory evidence that audit quality may be increased when an accounting Act was imposed or when there is a low proportion of listed companies to registrant audit firms. Even though there is evidence that audit firms may be less tolerant of earnings management when an accounting Act existed or when there is a low proportion of listed companies to registrant audit firms, the audit firms are also more likely to draw unqualified audit opinions. Interestingly, the adoption of

ISQC1 and the English/non-English accounting standards may not impact audit quality since these two factors do not impact a level of discretionary accruals and the audit firms' issuances of unqualified audit reports.

The univariate tests in the previous section focus only on the comparison between each pair of variables. The tests ignore the influence of other variables. In this section, nine probit regressions (one for each level of discretionary accruals) as used in Chapter 7 are used to identify the joint influence of our five institutional variables on audit quality. They are used to test how audit firms in different accounting environments are able to tolerate their clients' earnings management. The audit firm's tolerance to earnings management is predicted by the probability of issuing unqualified audit opinions at the different levels of reported discretionary accruals. The prediction's assumption is that there might be a level of discretionary accruals which is acceptable to an audit firm. The audit firm can express unqualified opinions even though the discretionary accruals are not removed from the financial statements.

Differently accepted levels of discretionary accruals (artificial audit materiality levels or benchmarks), which range from 0.5%, 1%, 2.5%, 5%, 7.5%, 10%, 15%, 20% to 30% of lagged total assets, are used one for each probit regression. The probit regression starts with a small benchmark and at a small level of benchmark the audit firm should have a high probability of being defined as a high quality audit provider. However, if increasing the benchmark also increases this probability, this implies that audit quality is impaired since the audit firm can be tolerant of a high level of discretionary accruals without modifying an unqualified audit opinion.

The results of the probit regressions are presented in Table 18 on Page 277-279.

Table 18: Results of Probit Model (n=17,758)

AudQua	Expected sign	Trend	Audit accepted levels of discretionary accruals							
			0.5%		1.0%		2.5%		5.0%	
			Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
AudRank	-	Increase	-0.405	0.000 ***	-0.290	0.000 ***	-0.181	0.000 ***	-0.093	0.000 ***
Tenure	nil	No change	-0.010	0.001 ***	0.000	0.981	0.008	0.026 *	0.015	0.000 ***
ChangeAud	+/-	Decrease/Increase	0.158	0.053 *	0.155	0.000 ***	0.107	0.004 ***	0.050	0.160
DtoE	n/a	n/a	0.000	0.644	0.000	0.641	0.000	0.581	0.000	0.449
ROA	n/a	n/a	0.000	0.286	0.000	0.414	0.000	0.688	0.010	0.008 **
natTA	n/a	n/a	0.043	0.000 ***	0.047	0.000 ***	0.047	0.000 ***	0.050	0.000 ***
EngLsh	+	Decrease	-0.359	0.000 ***	-0.174	0.000 ***	-0.016	0.673	0.150	0.000 ***
InspecAF	+	Decrease	-0.183	0.000 ***	-0.111	0.003 ***	-0.027	0.379	0.030	0.306
List to AuFirm	+	Decrease	-0.140	0.028 **	-0.023	0.656	0.080	0.054 *	0.238	0.000 ***
AccAct	+	Decrease	-0.078	0.178	-0.081	0.097 *	-0.026	0.515	-0.075	0.049 **
ISQC1	+	Decrease	-0.295	0.000 ***	-0.193	0.003 ***	-0.103	0.052 *	0.025	0.612
Constant			-1.480	0.000 ***	-1.572	0.000 ***	-1.438	0.000 ***	-1.286	0.000 ***
LR statistics			528.010		269.33		164.18		280.71	
Log likelihood			-6184.144		-7900.1548		-10702.415		-12040.498	
Pseudo R2			0.040		0.025		0.010		0.007	

Table 18: Results of Probit Model (n=17,758) (continued)

AudQua	Expected sign	Trend	Audit accepted levels of discretionary accruals									
			7.5%		10.0%		15.0%		20.0%		30.0%	
			Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
AudRank	-	Increase	-0.016	0.580	0.084	0.005 ***	0.234	0.000 ***	0.375	0.000 ***	0.375	0.000 ***
Tenure	nil	No change	0.019	0.000 ***	0.022	0.000 ***	0.023	0.000 ***	0.026	0.000 ***	0.026	0.000 ***
ChangeAud	+/-	Decrease/Increase	0.033	0.371	0.038	0.326	-0.054	0.212	-0.072	0.129	-0.072	0.129
DtoE	n/a	n/a	0.000	0.484	0.000	0.333	0.000	0.262	0.000	0.322	0.000	0.322
ROA	n/a	n/a	0.002	0.000 ***	0.003	0.000 ***	0.004	0.000 ***	0.000	0.005 ***	0.000	0.005 ***
natTA	n/a	n/a	0.052	0.000 ***	0.055	0.000 ***	0.039	0.000 ***	0.039	0.000 ***	0.039	0.000 ***
EngLsh	+	Decrease	0.285	0.000 ***	0.431	0.000 ***	0.565	0.000 ***	0.724	0.000 ***	0.724	0.000 ***
InspecAF	+	Decrease	0.035	0.251	0.044	0.184	0.015	0.691	0.094	0.034 **	0.094	0.034 **
List to AuFirm	+	Decrease	0.325	0.000 ***	0.374	0.000 ***	0.413	0.000 ***	0.467	0.000 ***	0.467	0.000 ***
AccAct	+	Decrease	-0.102	0.009 ***	-0.101	0.015 **	-0.073	0.124	-0.094	0.083 *	-0.094	0.083 *
ISQC1	+	Decrease	0.076	0.129	0.060	0.258	0.172	0.005 ***	0.221	0.002 ***	0.221	0.002 ***
Constant			-1.179	0.000 ***	-1.192	0.000 ***	-0.666	0.002 ***	-0.622	0.010 **	-0.622	0.010 **
LR statistics			458.3		580.18		690.53		779.3		779.3	
Log likelihood			-11438.168		-10322.4		-8075.4765		-6627.3883		-6627.3883	
Pseudo R2			0.009		0.012		0.022		0.029		0.029	

Table 18: Results of Probit Model (continued)

Note:

The model is:

$$\Pr(AudQua)_{it} = \alpha + \beta_1 AudRank_{it} + \beta_2 Tenure_{it} + \beta_3 ChangeAud_{it} + \beta_4 ROA_{it} + \beta_5 DtoE_{it} + \beta_6 natTA_{it} + \beta_7 EngLsh_p + \beta_8 InspecAF_{pt} + \beta_9 List\ to\ AuFirm_p + \beta_{10} AccAct_{pt} + \beta_{11} ISQC1_{pt} + v_{it};$$

where

$AudQua_{it}$	=	audit quality for firm i in year t and is equal to 0 if $Over_{it}$ & $Clean_{it}$ or $Under_{it}$ & $UnClean_{it}$; and 1 if $Under_{it}$ & $Clean_{it}$ or $Over_{it}$ & $UnClean_{it}$;
$Over_{it}$	=	$[\mid DA_{it}\mid -AcceptedDA] > 0$;
$Under_{it}$	=	$[\mid DA_{it}\mid -AcceptedDA] < 0$;
$Clean_{it}$	=	clean opinion;
$UnClean_{it}$	=	other opinions;
$AcceptedDA$	=	an audit accepted level of discretionary accruals;
$\mid DA_{it}\mid$	=	an absolute value of discretionary accruals for firm i in year t;
$AudRank_{it}$	=	the rank of audit firm type for firm i in year t which is equal to 1 if the audit firm type is a big firm and 2 if the audit firm type is a non-big firm ;
$Tenure_{it}$	=	the number of consecutive years for which audit firms within the same type were employed as the listed company's auditor for firm i at year t;
$ChangeAud_{it}$	=	dummy variables which is equal to 1 if firm i in year t switches audit firm type, 0 otherwise;
ROA_{it}	=	return on assets for firm i in year t which is the Compustat item ROA or is computed as $[net\ income_{it}\ (IB)/total\ assets_{it}(AT)] \, x100$;
$DtoE_{it}$	=	debt to equity ratio which is computed as $[long-term\ deb_{it}(DLTT) + current\ portion\ of\ long-term\ debt_{it}(DD1)]\ /\ total\ stockholders'equity_{it}\ (SEQ)$;
$natTA_{it}$	=	a natural logarithm of total assets (USD) for firm i in year t;
$EngLsh_p$	=	a dummy variable that is equal to 1 if the language of country p's accounting standards is English and 0 otherwise;
$InspecAF_{pt}$	=	a dummy variable that is equal to 1 if country p' independent regulator who takes responsibility to conduct audit firm inspections exists in year t and 0 otherwise;
$List\ to\ AuFirm_p$	=	a dummy variable that is equal to 1 if the average of country p's proportion of listed companies to registrant audit firms is less than 5:1 and 0 otherwise: the proportion is computed as $\dfrac{number\ of\ listed\ companies_p}{number\ of\ registrant\ audit\ firms_p}$;
$AccAct_{pt}$	=	a dummy variable that is equal to 1 if country p's accounting Act is effective in year t and 0 otherwise
$ISQC1_{pt}$	=	a dummy variable that is equal to 1 if country p's ISQC1 is effective in year t and 0 otherwise;
v_{it}	=	unspecific random effects for firm i in year t;
i	=	1,…,I firm index;
p	=	Indonesia, Malaysia, the Philippines, Thailand or Singapore; and
t	=	1,…,T_i, year index.

*, **, and *** indicate significant level of coefficient at 0.10, 0.05, and 0.01, one-tailed test for predicted sign , all others are two-tailed test, respectively.

Pseudo R^2 is computed as
$(Log\ Likelihood\ value\ of\ the\ constant-only\ model-Log\ Likelihood\ value\ of\ the\ model)/ Log\ Likelihood\ value\ of\ the\ constant$. (Gould, 2001)

The results of this section are discussed as follows. Section 9.2.3.1 provides the main focus of this chapter. It discusses the influence of our chosen institutional variables on audit quality at a national level. Sections 9.2.3.2, 9.2.3.3 and 9.2.3.4 compare the results of this chapter with those of Chapter 7. Section 9.2.3.2 gives further evidence of testing the difference in audit qualities between big firms and non-big firms. Sections 9.2.3.3 and 9.2.2.4 revisit the influence of firm and engagement level factors on audit quality.

9.2.3.1 HOW DO OUR INSTITUTIONAL FACTORS INFLUENCE AUDIT QUALITY?

The influences of our chosen institutional variables on audit quality at a national level are found as follows.

9.2.3.1.1 LANGUAGE OF THE ACCOUNTING STANDARDS

A country with English accounting standards is perceived to have a higher level of audit quality since the country does not face a delay in adopting international accounting standards arising from the process of translation.   Coefficient of $EngLsh$ is then expected to have a positive sign at low levels of benchmark. If the benchmark increases, its coefficient is expected to decrease. If so, it indicates that a country's English accounting standards increase audit quality at a national level.

From Table 16 above, the coefficients of $EngLsh$ are significant at the benchmarks 0.5%, 1%, 5%, 7.5%, 10%, 15%, 20% and 30%. $EngLsh$ has a negative coefficient at benchmarks 1% and 0.5%. This indicates that if the accepted level of discretionary accruals are 1% or 0.5% of lagged total assets, audit firms from a country where the language of the accounting standards is English have a lower probability of being defined as a high quality audit provider than those from a country where the language of the accounting standards is not English. However, the coefficients of $EngLsh$ increase when the accepted level of discretionary accruals is greater than 2.5%. This is evidence that audit firms from a country where the language of the accounting standards is English are more tolerant of discretionary accruals than those from a country where the language of the accounting standards is not English. They might draw unqualified audit opinions even when financial statements have a high level of discretionary accruals. If we use a high

level of benchmark for measuring audit quality, these audit firms have a higher probability of being defined as a high quality audit provider. This impairs audit quality. Therefore, **Hypothesis_0 5** *that* English accounting standards would create a better accounting environment for promoting audit quality is rejected.

Countries where there is a need to translate international accounting standards into their local language might fact a delay in the implementation of these international accounting standards. This might lead to temporary differences between international and local accounting standards and even the perception that these countries might have a lower audit quality than those with English accounting standards. However, the results here provide contradictory evidence to this perception.

Even though many countries may struggle to bring national accounting and auditing standards into the line with international standards owing to the difficulty in the process of translation and implementation, this may not be an indicator that their audit quality is impaired. Since the local accounting standards are set by the local accounting regulatory body and based on the specific circumstances in one country, some of them might be more effective than those of international accounting standards. In addition, international accounting standards and practices may have a large number of areas which require users of those standards and practices to exercise their judgement. This may create grey areas or even loopholes in accounting standards and practices and, in turn, provide more opportunity for earnings management. Therefore, there might be a need for all countries to consider whether international accounting standards are suitable for them. Sometimes there might also be a need to amend these standards before implementation. Importantly, since these accounting standards are in local language, they may be easier to be immediately imposed and to be understood.

9.2.3.1.2 INDEPENDENT AUDIT REGULATOR

An inspection of audit firms by an independent audit regulator is also perceived to raise audit firms' awareness of their audit qualities. Therefore, audit firms should be less tolerant of earnings management after an independent audit regulator existed. *InspecAF* is then expected to have a positive coefficient at a low level of benchmark but a negative coefficient at a high level of benchmark.

However, the probit regression here found that *InspecAF* has a negative coefficient at benchmarks 0.5% and 1% of lagged total assets. This shows that at these levels of benchmark for measuring audit quality an audit firm has a lower probability of being defined as a high quality audit provider after an independent audit regulator was established. Contrary to the benchmarks 0.5% and 1%, a positive coefficient indicates that an audit firm in the periods during which an independent audit regulator existed, has a higher probability of being defined as a high quality audit provider only if benchmarks are 20% or 30%. At benchmarks 2.5%, 5%, 7.5%, 10% and 15%, there is no difference in an audit firm's probability of being defined as a high quality audit provider before and after an independent audit regulator was established. These findings reject $Hypothesis_0$ *6* that audit firms would have higher audit quality after an independent audit regulator was set up.

From the findings, we can infer that the establishment of an independent audit regulator who takes responsibility to perform registrant audit firm inspection may not increase auditors' motivation to provide a high quality audit. This supports the author's suspicion of impaired audit quality after an independent audit regulator as found by the univariate tests in Section 9.2.1 above. The author then questions whether monitoring and inspecting audit firm quality performed by an independent audit regulator in Southeast Asia would not be tough or well-structured enough to force auditors to be fully aware of the quality of audit they conduct.

From this question, the author suggests that there might be a need for restructuring the existing policies on audit firm inspection. For example, as suggested by Hilary and Lennox (2005), it is important to publish the results of an audit firm inspection as soon as the inspection process completed. IAASB's 2014 paper *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality* also highlights that the results and findings of audit firm inspections should be available to the public. Importantly, the regulator needs to monitor the audit firms' actions taken to address issues found by the inspections. The results of the audit firm inspection should also be reported to standard setters.

Our inference about the negative influence of an independent audit regulator on audit quality at a national level may be due to the fact that, during the majority of the observation period of 2000 to 2011, there was no independent audit regulator. Thailand and Malaysia established their independent audit regulators in 2010 and Singapore set up

its independent audit regulator in 2004. As of 2011, Indonesia and the Philippines still lack an independent audit regulator that is a member of IFIAR. Therefore, the model may not capture well the impact of the change in this institutional factor on audit quality.

9.2.3.1.3 THE NUMBER OF REGISTRANT AUDIT FIRMS

Licensing registrant audit firms may help a stock market ensure that audit firms have sufficient competence in auditing listed companies. However, one of the negative side effects of this is that there may be a limited number of registrant audit firms. The limited number of registrant audit firms may lead to the high proportion of listed companies to use registrant audit firms and, in turn, impair audit quality. Hence, *List to AuFirm* is predicted to have a positive coefficient at a low level of benchmark but a negative coefficient at a high level of benchmark.

The coefficient of *List to AuFirm* is found to be insignificant only at the benchmark 1%. Its coefficient is negative only at the benchmark 0.5%. Increasing the benchmarks from 2.5%, 5%, 7.5%, 10%, 15%, 20% to 30% continually increase the probability that audit firms from a country with a low proportion of listed companies to registrant audit firms would be defined as a high quality audit provider. This shows that although a country's proportion of listed companies to registrant audit firms may be low, audit firms in that country have a high probability of issuing unqualified audit reports even though clients have high levels of discretionary accruals. This rejects **$Hypothesis_0$ 7** that a low proportion of listed companies to registrant audit firms would promote audit quality.

Whether a small number of registrant auditors leads to an imbalance between demand for audit and its supply and eventually impairs audit quality is an open question. This chapter however provides a contradictory finding. It found that a small number of registrant audit firms could help promote audit quality.

From a small number of registrant audit firms, we can infer that each audit firm could have a large number of clients because listed companies have a limited choice of auditors. In addition, according to the results of the interviews in Chapter 8 that the listed companies thoroughly select their auditors and are less likely to select audit firms who are facing issues with a securities exchange commission, the registrant audit firms may be more aware of their audit qualities. They may worry that an audit failure possibly causes

disastrous consequences for them if it occurs, such as losing their reputations and existing clients, being severely punished by the securities exchange commission, or even a drop in their revenues. Moreover, with a small number of registrant audit firms, the regulatory body and the securities exchange commission could closely monitor audit firm quality. Therefore, this is evidence that a limited number of registrant audit firms may not be a constraint on promoting audit quality.

9.2.3.1.4 ACCOUNTING ACT

After imposing an accounting Act that may put a greater burden of responsibilities for their audited financial statements on audit firms and listed companies, the audit firms are presumed to be less tolerant of earnings management whilst the listed companies are assumed to engage less in earnings management. Therefore, the coefficient of $AccAct$ is expected to have a positive sign at a low benchmark but a negative sign at a high benchmark. However, contrary to this expectation, the coefficients of $AccAct$ are significant at the benchmarks 1%, 5%, 7.5%, 10%, 20% and 30%. All coefficients are negative. This is evidence that in comparison to the periods before an accounting Act was mandated, an audit firm in the period after an accounting Act is effective still has a higher probability for issuing unqualified audit reports with clients' high levels of discretionary accruals. Its probability of being defined as a high quality audit provider reduces at all these benchmarks. This rejects **Hypothesis$_0$ 8** that audit quality would be improved after an accounting Act was imposed. The rejection of **Hypothesis$_0$ 8** is also a question of the influence of other laws on audit quality at a national level.

9.2.3.1.5 ISQC1

Owing to a belief that $ISQC1$ should be one of the key factors in promoting audit quality at a national level, $ISQC1$ is also expected to have a positive coefficient at a low benchmark but a negative coefficient at a high benchmark. However, the coefficients of $ISQC1$ are found to be significantly negative at the benchmarks 0.5%, 1%, and 2.5% but significantly positive at the benchmarks 15%, 20% and 30%. This shows that an audit firm has a high probability of expressing unqualified audit opinions with clients' high levels of discretionary accruals even after ISQC1 was adopted. Its probability of being defined as a high quality audit provider decreases at a low benchmark but increases at a high

benchmark. This rejects *Hypothesis$_0$ 9* that audit quality would be improved after ISQC1 was adopted.

From this finding, we deduce that ISQC1 may be less effective in promoting audit quality at a national level. ISQC1 may be difficult to implement in practice, especially for small audit firms under intense pricing competition in the market for audit service. These small firms, which have a large market share in Southeast Asia, may have a constraint on inputting more resources and on investing more in their infrastructures in order to establish and maintain the quality control system required by ISQC1. Hence, their existing quality control systems may have not reached ISQC1's requirements yet. The regulator may need to provide clearer guidelines for implementing ISQC1 with these audit firms and also need to further educate them about ISQC1. It may also be beneficial for the regulators in all countries in this region to adopt the recommendation of IAASB's 2014 paper of the framework for audit quality. Importantly, the audit firm inspection by the independent audit regulators should be undertaken by using ISQC1 as a framework for assessing audit firms' quality control systems.

Our finding that ISQC1 may be ineffective in promoting audit quality at a national level may be due to the limitation that ISQC1 has only recently been adopted. It has been effective from 2010 onwards whilst the observations cover the period from 2000 to 2011. Therefore, the impact of ISQC1 on audit quality at a national level may not be clearly seen yet.

To summarise, the probit model in this chapter provides evidence that there may be a need for further observing the influence of our chosen institutional factors and/or other institutional factors on audit quality. Nonetheless, from this evidence, we can also infer that national level factors may be less effective in promoting audit quality in Southeast Asia. Firm and engagement level factors may outperform national level factors in promoting audit quality.

9.2.3.2 BIG FIRMS ARE LESS TOLERANT OF DISCRETIONARY ACCRUALS THAN NON-BIG FIRMS

Similarly to Chapter 7, $AudRank$ is used to test whether non-big firms are more tolerant of discretionary accruals than big firms. The more the non-big firm is able to tolerate its clients' discretionary accruals, the less the quality of its audits. The finding of the test in this chapter is also similar to that of Chapter 7 that an increase in the accepted levels of discretionary accruals is in line with the increase in the coefficients of $AudRank$. $AudRank$ is found to have a significant negative coefficient at the benchmarks that are below 7.5% but a significant positive coefficient at the benchmarks that are greater than 7.5%. This finding reaffirms that at low-accepted levels of discretionary accruals non-big firms have a lower probability of being defined as high quality audit providers. However, this probability is higher at high-accepted levels of discretionary accruals. This strengthens the results of Chapter 7 that non-big firms are more tolerant of a high level of discretionary accruals than big firms. In other words, big firms are of higher audit quality than non-big firms.

9.2.3.3 HOW DO FIRM LEVEL FACTORS INFLUENCE AUDIT QUALITY?

The probit model in this chapter also investigates the influence of firm level factors on audit quality through $Tenure$ and $ChangeAud$. If firm level factors impact audit quality by leading to the differences in audit qualities within the same type of audit firms and/or between types of audit big/non-big firm, $Tenure$ and $ChangeAud$ should have a significant positive or negative coefficient.

The coefficients of $Tenure$ are found to be insignificant only at the benchmark 1%. They are negative only at the benchmark 0.5%. The coefficients of $Tenure$ continually increase in line with an increase in the level of benchmark. This means that an audit firm's probability of being defined as a high quality audit provider increases if an accepted level of discretionary accruals increases. This shows that each year more a listed company employs the same type of audit firm as its auditor, the probability that the audit firm would issue an unqualified audit report with a high level of discretionary accruals reported by a client increases. This supports the results of Chapter 7.

The coefficients of $ChangeAud$ are found to be insignificant at the benchmarks 0.5%, 1% and 2.5%. For other benchmarks, their signs are significantly positive. This finding of $ChangeAud$ is similar to Chapter 7 that we can capture the differences in qualities from the switching of an audit between types of audit firm.

The findings of $Tenure$ and $ChangeAud$ in this chapter are consistent with those of Chapter 7 that in Southeast Asia firm level factors may have more influence on audit quality than national level factors. These factors lead audit quality to vary from individual firm to individual firm.

9.2.3.4 HOW DO ENGAGEMENT LEVEL FACTORS INFLUENCE AUDIT QUALITY?

This chapter and Chapter 7 have the same result that coefficients of $DtoE$ are insignificant at all levels of benchmark. However, this chapter provides slightly contradictory evidence for the influence of ROA and $natTA$ on audit quality. In this chapter, the coefficients of ROA are significant at benchmarks above 2.5%, whilst Chapter 7 reported that the coefficients of ROA are significant at benchmarks above 5%. All the coefficients of ROA are positive in both chapters. Even though there is slightly contradictory evidence for ROA, this chapter's evidence still supports the results of Chapter 7 that an audit firm's probability of issuing an unqualified audit report with a high level of discretionary accruals may vary according to an audited company performance.

The coefficients of $natTA$ reported here and in Chapter 7 are almost similar. They are significantly positive at all levels of benchmark, except for at the benchmark 0.5% of Chapter 7. This reaffirms that an audit firm may be more tolerant of discretionary accruals reported by a large audited company.

Before moving to the next section, we conclude from the results of this section that, in Southeast Asia, national level factors, such as the language of the accounting standards, an independent audit regulator, a proportion of listed companies to registrant audit firms, an accounting Act and ISQC 1 may be less effective in promoting audit quality than firm and engagement level factors. Therefore, audit quality may vary from firm to firm. Our conclusion of this section has still left room for identifying national level factors that

impact audit quality and also a further study of our chosen institutional factors on audit quality.

9.3 ROBUSTNESS TEST

Identifying national level factors that influence audit quality is one of this thesis's main objectives. However, the test of our chosen institutional variables from the interviews in the previous section still provided unclear evidence for the influence of these institutional factors on audit quality. Therefore, we have not yet addressed Chapter 7's question of why audit firms from Malaysia and Singapore are more tolerant of discretionary accruals than those from Indonesia, the Philippines and Thailand even though Malaysia and Singapore are perceived to have a higher level of investor protection than Indonesia, the Philippines and Thailand.

To address Chapter 7's question, the robustness test in this section further investigates the influence of other national level factors on audit quality. In addition to the five chosen institution variables that were tested in Section 9.2, another eight institutional variables from the empirical studies and ACGA's results of the assessment of countries' accounting environment are introduced into the probit model. Table 19 on Page 289 reports the correlation matrix amongst these 13 institutional variables, DA, $|DA|$ and $AudOpi$ and Table 20 on Page 290 presents the results of the robustness test.

Table 19: Correlation Matrix Amongst 13 Institutional Variables (n=17,758)

n=17,758	DA	|DA|	AudOpi	EngLsh	InspecAF	List to AuFirm	AccAct	ISQC1	Legal System	Islamic Acc	CPI	CGrules& practice	Enforce-ment	Political& Regulatory	IGAAP	CGculture
DA				-0.009	-0.017	0.020	0.025	-0.009	0.015	-0.012	-0.007	0.004	-0.001	-0.014	-0.009	0.012
				0.260	0.020**	0.008***	0.000***	0.236	0.042**	0.122	0.383	0.624	0.945	0.061*	0.246	0.098*
|DA|				0.008	0.050	-0.074	-0.040	0.013	-0.025	-0.037	0.028	0.026	0.024	0.031	0.028	0.033
				0.303	0.000***	0.000***	0.000***	0.081*	0.001***	0.000***	0.000***	0.001***	0.001***	0.000***	0.000***	0.000***
AudOpi				0.221	0.1523	0.027	0.169	0.068	0.231	-0.054	0.241	0.150	0.214	0.229	0.259	0.147
				0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
EngLsh	-0.008	0.008	0.221		0.297	-0.105	0.134	0.053	0.3168	0.1828	0.697	0.108	0.227	-0.014	0.816	0.073
	0.264	0.288	0.000***		0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.061*	0.000***	0.000***
InspecAF	-0.003	0.043	0.152	0.2967		-0.375	-0.027	0.212	0.273	-0.357	0.500	0.565	0.685	0.644	0.612	0.514
	0.660	0.000***	0.000***	0.000***		0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
List to AuFirm	0.004	-0.070	0.072	-0.105	-0.375		0.690	-0.273	0.528	0.386	-0.171	-0.173	-0.172	-0.337	-0.263	-0.339
	0.561	0.000***	0.000***	0.000***	0.000***		0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
AccAct	0.015	-0.026	0.169	0.134	-0.027	0.690		0.027	0.501	0.075	-0.008	-0.036	0.052	-0.050	0.008	-0.083
	0.045**	0.001***	0.000***	0.000***	0.000***	0.000***		0.000***	0.000***	0.000***	0.291	0.000***	0.000***	0.000***	0.000***	0.000***
ISQC1	0.015	0.0321	0.068	0.053	0.212	-0.273	0.027		-0.101	-0.128	0.099	0.045	0.144	0.168	0.109	0.147
	0.049**	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***		0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
LegalSystem	0.008	-0.035	0.231	0.317	0.273	0.528	0.501	-0.101		-0.142	0.651	0.651	0.657	0.440	0.544	0.446
	0.265	0.000***	0.000***	0.000***	0.000***	0.000***	0.000**	0.000***		0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
IslamicAcc	-0.022	-0.047	-0.054	0.183	-0.357	0.386	0.075	-0.128	-0.142		-0.166	-0.686	-0.543	-0.076	-0.182	-0.820
	0.004***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***		0.000***	0.000***	0.000***	0.000***	0.000***	0.000***
CPI	0.002	0.030	0.204	0.602	0.627	-0.419	-0.148	0.168	0.651	-0.375		0.651	0.686	0.853	0.896	0.565
	0.753	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***		0.000***	0.000***	0.000***	0.000***	0.000***
CGrules& practice	0.012	0.023	0.135	0.099	0.589	-0.289	-0.121	0.077	0.790	-0.728	0.577		0.919	0.521	0.617	0.840
	0.115	0.002***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***		0.000***	0.000***	0.000***	0.000***
Enforcement	0.005	0.013	0.221	0.333	0.670	-0.185	0.086	0.210	0.694	-0.454	0.880	0.866		0.706	0.731	0.750
	0.545	0.090*	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***		0.000***	0.000***	0.000***
Political& Regulatory	-0.008	0.002	0.263	0.770	0.573	-0.127	0.083	0.105	0.567	0.007	0.814	0.471	0.749		0.964	0.411
	0.287	0.768	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.372	0.000***	0.000***	0.000***		0.000***	0.000***
IGAAP	0.000	0.023	0.261	0.803	0.612	-0.297	0.008	0.130	0.546	-0.273	0.935	0.653	0.794	0.906		0.486
	0.989	0.003***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***		0.000***
CGculture	0.016	0.035	0.181	0.150	0.615	-0.379	-0.114	0.154	0.473	-0.774	0.789	0.921	0.862	0.537	0.681	
	0.038**	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	0.000***	

The upper half is the Spearman correlation coefficients and the lower half is the Pearson correlation coefficients. *, **, and *** indicate significant level of coefficient at 0.10, 0.05, and 0.01 for one-tailed test, respectively.

Table 20: Results of Robustness Test (n=17,758)

| AudQua | Expected sign | Trend | Audit accepted levels of discretionary accruals | | | | | | | | | |
| | | | 0.5% | | 1.0% | | 2.5% | | 5.0% | | 7.5% | |
			Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
DummyAud	+	Decrease	0.250	0.000 ***	0.196	0.000 ***	0.144	0.000 ***	0.073	0.013 **	0.023	0.457
ChangeAud	+/-	Decrease/Increase	0.106	0.030 **	0.110	0.010 **	0.091	0.016 **	0.053	0.148	0.058	0.124
Tunure	nil	No change	0.010	0.069	0.010	0.026 **	0.011	0.002 ***	0.017	0.000 ***	0.020	0.000 ***
ROA	n/a	n/a	0.000	0.160	0.000	0.302	0.000	0.752	0.001	0.011 **	0.002	0.000 ***
DtoE	n/a	n/a	0.000	0.541	0.000	0.566	0.000	0.536	0.000	0.440	0.000	0.489
natTA	n/a	n/a	0.024	0.029 **	0.037	0.000 ***	0.050	0.000 ***	0.661	0.000 ***	0.075	0.000 ***
EngLsh	+	Decrease	5.571	0.000 ***	3.648	0.000 ***	2.028	0.000 ***	1.492	0.000 ***	0.846	0.001 ***
InspecAF	+	Decrease	-0.136	0.014 **	-0.091	0.045 **	-0.073	0.053 *	-0.049	0.176	-0.085	0.024 **
List to AuFirm	+	Decrease	-6.543	0.000 ***	-4.118	0.000 ***	-1.611	0.000 ***	0.153	0.668	0.900	0.015 **
ActAcc	+	Decrease	-0.352	0.000 ***	-0.256	0.000 ***	-0.106	0.072 *	-0.139	0.012 **	-0.150	0.007 ***
ISQC1	+	Decrease	-0.104	0.265	-0.055	0.452	-0.045	0.436	0.018	0.731	0.043	0.431
LegalSystem	+	Decrease	8.702	0.000 ***	5.514	0.000 ***	2.146	0.000 ***	-0.024	0.965	-0.899	0.108
IslamicAcc	n/a	n/a	0.421	0.008 **	0.128	0.334	-0.036	0.746	-0.147	0.164	-0.172	0.118
CPI	+	Decrease	-9.612	0.000 ***	-6.242	0.000 ***	-2.823	0.000 ***	-0.458	0.434	0.164	0.788
CGrules&practices	+	Decrease	6.250	0.000 ***	4.906	0.000 ***	3.963	0.000 ***	3.399	0.000 ***	2.370	0.008 ***
Enforcement	+	Decrease	2.771	0.005 ***	1.892	0.017 **	1.545	0.017 **	1.829	0.003 ***	1.842	0.003 ***
Political&Regulatory	+	Decrease	2.731	0.000 ***	2.544	0.000 ***	2.067	0.000 ***	1.501	0.001 ***	0.959	0.039 **
IGAAP	+	Decrease	-54.836	0.000 ***	-35.933	0.000 ***	-19.622	0.000 ***	-12.857	0.000 ***	-4.392	0.101
CGculture	+	Decrease	4.247	0.000 ***	1.196	0.136	-0.198	0.767	0.094	0.883	-0.254	0.697
Constant			31.085	0.000 ***	19.681	0.000 ***	9.277	0.000 ***	4.504	0.001 ***	-0.516	0.713
LR statistics			479.220		240.02		158.75		272.88		445.16	
Log likelihood			-5,920.691		-7,732.219		-10,642.810		-12,016.403		-11,411.965	
Pseudo R2			0.081		0.045		0.016		0.009		0.011	

Table 20: Results of Robustness Test (n=17,758) (continued)

AudQua	Expected sign	Trend	Audit accepted levels of discretionary accruals							
			10.0%		15.0%		20.0%		30.0%	
			Coefficient	p-value	Coefficient	p-value	Coefficient	p-value	Coefficient	p-value
DummyAud	+	Decrease	-0.049	0.136	-0.137	0.000 ***	-0.238	0.000 ***	-0.238	0.000 ***
ChangeAud	+/-	Decrease/Increase	0.079	0.047 **	0.014	0.758	0.008	0.867	0.008	0.867
Tunure	nil	No change	0.020	0.000 ***	0.014	0.005 ***	0.011	0.052	0.011	0.052
ROA	n/a	n/a	0.003	0.000 ***	0.003	0.000 ***	0.000	0.008 ***	0.000	0.008 ***
DtoE	n/a	n/a	0.000	0.342	0.000	0.287	0.000	0.355	0.000	0.355
natTA	n/a	n/a	0.082	0.000 ***	0.075	0.000 ***	0.086	0.000 ***	0.086	0.000 ***
EngLsh	+	Decrease	0.261	0.336	-0.905	0.004 ***	-2.341	0.000 ***	-2.341	0.000 ***
InspecAF	+	Decrease	-0.107	0.008 ***	-0.197	0.000 ***	-0.173	0.001 ***	-0.173	0.001 ***
List to AuFirm	+	Decrease	1.568	0.000 ***	3.246	0.000 ***	4.887	0.000 ***	4.887	0.000 ***
ActAcc	+	Decrease	-0.079	0.180	0.000	0.999	0.061	0.422	0.061	0.422
ISQC1	+	Decrease	0.023	0.693	0.084	0.212	0.082	0.297	0.082	0.297
LegalSystem	+	Decrease	-1.774	0.003 ***	-4.061	0.000 ***	-6.251	0.000 ***	-6.251	0.000 ***
IslamicAcc	n/a	n/a	-0.069	0.554	-0.176	0.189	-0.199	0.193	-0.199	0.193
CPI	+	Decrease	0.806	0.211	2.741	0.000 ***	4.740	0.000 ***	4.740	0.000 ***
CGrules&practices	+	Decrease	1.802	0.059 *	0.673	0.545	-0.332	0.794	-0.332	0.794
Enforcement	+	Decrease	1.232	0.059 *	1.143	0.129	0.749	0.390	0.749	0.390
Political&Regulatory	+	Decrease	0.335	0.496	0.006	0.992	-1.231	0.054 *	-1.231	0.054 *
IGAAP	+	Decrease	3.464	0.226	16.156	0.000 ***	32.674	0.000 ***	32.674	0.000 ***
CGculture	+	Decrease	0.177	0.799	-0.193	0.810	-1.622	0.081 *	-1.622	0.081 *
Constant			-5.496	0.000 ***	-13.046	0.000 ***	-23.129	0.000 ***	-23.129	0.000 ***
LR statistics			562.82		660.75		721.48		721.48	
Log likelihood			-10,281.185		-7,973.119		-6,465.706		-6,465.706	
Pseudo R2			0.016		0.034		0.052		0.052	

Table 20: Results of Robustness Test (n=17,758) (continued)

Note: The model is:

$$\Pr(AudQua)_{it} = \alpha + \beta_1 DummyAud_{it} + \beta_2 ChangeAud_{it} + \beta_3 Tenure_{it} + \beta_4 ROA_{it} + \beta_5 DtoE_{it} + \beta_6 natTA_{it} + \beta_7 EngLsh_p + \beta_8 InspecAF_{pt} + \beta_9 List\ to\ AuFirm_p + \beta_{10} AccAct_{pt} + \beta_{11} ISQC1_{pt} + \beta_{12} LegalSystem_p + \beta_{13} IslamicAcc_p + \beta_{14} CPI_{pt} + \beta_{15} CGrules\&practices_{pt} + \beta_{16} Enforement_{pt} + \beta_{17} Political\&Regulatory_{pt} + \beta_{18} IGAAP_{pt} + \beta_{19} CGculture_{pt} + v_{it};\ \text{where}$$

$AudQua_{it}$	=	audit quality for firm i in year t;
$DummyAud_{it}$	=	a dummy variable that is equal to 1 if firm i was audited by a big firm in year t and 0 otherwise;
$Tenure_{it}$	=	the number of consecutive years for which audit firms within the same type were employed as the listed company's auditor for firm i at year t;
$ChangeAud_{it}$	=	a dummy variable which is equal to 1 if firm i in year t switches audit firm type, 0 otherwise;
ROA_{it}	=	return on assets for firm i in year t which is the Compustat item ROA or is computed as $[net\ income_{it}\ (IB)/total\ assets_{it}(AT)]\ x100$;
$DtoE_{it}$	=	debt to equity ratio which is computed as $[long-term\ deb_{it}(DLTT) + current\ portion\ of\ long-term\ debt_{it}(DD1)]\ /\ total\ stockholders'equity_{it}\ (SEQ)$;
$natTA_{it}$	=	a natural logarithm of total assets (USD) for firm i in year t;
$EngLsh_p$	=	a dummy variable that is equal to 1 if the language of country p's accounting standards is English and 0 otherwise;
$InspecAF_{pt}$	=	a dummy variable that is equal to 1 if country p' independent regulator who takes responsibility to conduct audit firm inspections exists in year t and 0 otherwise;
$List\ to\ AuFirm_p$	=	a dummy variable that is equal to 1 if the average of country p's proportion of listed companies to registrant audit firms is less than 5:1 and 0 otherwise: the proportion is computed as $\dfrac{number\ of\ listed\ companies_p}{number\ of\ registrant\ audit\ firms_p}$;
$AccAct_{pt}$	=	a dummy variable that is equal to 1 if country p's accounting Act is effective in year t and 0 otherwise
$ISQC1_{pt}$	=	a dummy variable that is equal to 1 if country p's ISQC1 is effective in year t and 0 otherwise;
$LegalSystem_p$	=	a dummy variable that is equal to 1 if country p's legal system is common law tradition and 0 otherwise (Haw et al. (2004);
$IslamicAcc_p$	=	a dummy variable that is equal to 1 if country p's accounting standards and practices are influenced by Islamic accounting practices and 0 otherwise;
CPI_{pt}	=	country p's corruption perception index in year t assessed by the Transparency International (Wysocki, (2004);
$CGrules\&practices_{pt}$	=	country's score for CG rules and practices in year t evaluated by the ACGA;
$Enforcement_{pt}$	=	country's score for enforcement in year t evaluated by the ACGA;
$Political\&Regulatory_{pt}$	=	country's score for political and regulatory environment in year t evaluated by the ACGA;
$IGAAP_{pt}$	=	country's score for IGAAP in year t evaluated by the ACGA;
$CGculture_{pt}$	=	country's score for CG culture in year t evaluated by the ACGA;
v_{it}	=	unspecific random effects for firm i in year t;
i	=	1,…,I firm index;
p	=	Indonesia, Malaysia, the Philippines, Thailand or Singapore; and
t	=	1,…,T_i, year index.

*, **, and *** indicate significant level of coefficient at 0.10, 0.05, and 0.01, one-tailed test for predicted sign , all others are two-tailed test, respectively.

Pseudo R^2 is computed as
$(Log\ Likelihood\ value\ of\ the\ constant-only\ model - Log\ Likelihood\ value\ of\ the\ model)/Log\ Likelihood\ value\ of\ the\ constant.$ (Gould, 2001)

Tables 17 and 18 provide the following findings.

9.3.1 CORRELATIONS AMONG VARIABLES

Among the eight institutional variables, only $CGculture$ has a positive correlation with DA. $LegalSys$ and $IslamicAcc$ have a negative correlation with $|DA|$. Conversely CPI, $CGrules\&practices$, $Enforcement$, $IGAAP$ and $CGculture$ have a positive correlation with $|DA|$. Even though the correlation test indicates a significant level of coefficient, the coefficients range from -0.047 to +0.035, which are small. This then implies that the levels of discretionary accruals may not be materially different between each comparison. For example, the correlation test provides evidence that listed companies from countries with a good culture of corporate governance are more associated with income-increasing earnings management than those from other countries. However, their levels of income-increasing earnings management are not materially different from each other. The level of income-increasing earnings management reported by the listed companies from countries with a good culture of corporate governance is, approximately 3.8% or 1.2%, higher than those from other countries. From only the results of the correlation test, we still cannot draw inference about how these eight institutional factors are associated with earnings management and even audit quality.

The test of the correlation between $AudOpi$ and the eight institutional variables found that only $IslamicAcc$ has a negative correlation with $AudOpi$ whilst remaining institutional variables have a positive correlation with $AudOpi$. However, if we look at the coefficients of the correlation, we found that $IslamicAcc$ (r_p =-0.054, r_s =-0.037) slightly influences $AudOpi$. $CGrules\&practices$ (r_p = 0.135, r_s = 0.150) and $CGculture$ (r_p = 0.181, r_s = 0.147) moderately influence $AudOpi$. $LegalSys$ (r_p = 0.231, r_s = 0.231), CPI (r_p = 0.204, r_s = 0.241), $Enforcement$ (r_p = 0.221, r_s = 0.214) and $IGAAP$ (r_p = 0.261, r_s = 0.259) materially influence $AudOpi$. These findings indicate that the more the country has a better environment that creates good corporate governance; the easier the audit firm issues an unqualified audit report. In addition, the audit firm may also find it easier to issue an unqualified audit report under a country's common law tradition that provides higher protection for investors. From these findings, the author deduces that corporate governance and common law system may influence audit quality at a national level. The further test of

the influence of the eight institutional factors on audit quality at a national level through the probit model will be reported and discussed in the next section.

9.3.2 THE INFLUENCE OF THE EIGHT INSTITUTIONAL FACTORS ON AUDIT QUALITY

LegalSystem captures the influence of types of common/code system on audit quality at a national level. Especially, the common law system is deemed by previous studies (e.g. Hung, 2001; Haw, Hu, Hwang and Wu, 2004) to provide a high level of investor protection so that it may help promote audit quality at a national level. From Table 18 above, the coefficients of *LegalSystem* are insignificant only at the benchmarks 5% and 7.5%. The signs of the coefficients are positive at the benchmarks below 5%. On the other hand, they are negative at benchmarks above 10%. This can be interpreted as meaning that audit firms from a country with common law have a low probability of issuing unqualified audit reports with high levels of reported discretionary accruals. They then have a low probability of being defined as a high quality audit provider at low benchmarks but a high probability of being defined as a high quality audit provider at high benchmarks. Our interpretation is evidence that audit quality may increase under a common law system. To protect the investor, under a common law system, business practices and commercial law and laws and regulations relating to financial reporting may put a great burden of responsibility on auditors and listed companies.

In Malaysia and Indonesia, Islamic accounting practices influence their financial reporting. The author then suspects that Islamic accounting practices may influence audit quality at a national level. However, unlike *LegalSystem* , the coefficients of *IslamicAcc* are significant only at the benchmark 0.5%. From this, we can infer that Islamic accounting practice does not impact the probability that audit firms would issue unqualified audit reports with high levels of reported discretionary accruals.

Corruption is the big issue in Indonesia, Malaysia, the Philippines and Thailand. Therefore, the author expects that the higher the level of corruption (which is indicated by the lower*CPI*) the country has, the higher the level of earnings management and the lower the audit quality. The coefficients of *CPI* are found to be significant at the benchmarks below 5% and above 10%. At the benchmarks below 5%, they are negative. However, they are positive at benchmarks above 10%. From this finding, it can be deduced that audit firms

from a country with a low level of corruption have a high probability of drawing unqualified opinions with high levels of reported discretionary accruals. They then have a low probability of being defined as a high quality audit provider at low benchmarks but a high probability of being defined as a high quality audit provider at high benchmarks. This finding leads the author to have doubt as to whether earnings management may be less opportunistic practice and may be acceptable to auditors and audit companies in a country with a low level of corruption.

The probit model of the robustness test in this section also observes the influence of corporate governance on audit quality at a national level through $CGrules\&practices$, $Enforcement$, $Polical\&Regulatory$, $IGAAP$ and $CGculture$. The expectation of the observation is that the better corporate governance the country has, the lesser the earnings management and the higher the audit quality.

$CGrules\&practices$ and $Enforcement$ have similar results. They are significant at the benchmarks below 15% with positive coefficients. This shows that the efficiency of rules and practices regarding corporate governance and effective enforcement reduces the probability that audit firms expresses unqualified audit opinions with high levels of reported discretionary accruals. The coefficients of $Polical\&Regulatory$ are insignificant only at the benchmarks of 10% and 15%. They have a positive sign at the benchmarks below 10% but a negative sign at the benchmarks 20% and 30%. This is evidence that a country's appropriate and well-designed political and regulatory environment also lowers the probability that audit firms issue unqualified audit reports with high levels of reported discretionary accruals.

$IGAAP$ has significant coefficients with negative signs at benchmarks below 7.5%. On the other hand, it has significant coefficients with a positive sign at benchmarks above 10%. This can be interpreted as meaning that audit firms from a country where the structure of accounting and auditing environment is based on international standards and best practices still have a high probability of giving unqualified audit opinions with high levels of reported discretionary accruals. The coefficients of $CGculture$ are significant at benchmarks 0.5%, 20% and 30%. This means that a country's culture of corporate governance does not influence audit quality.

After introducing the eight institutional factors into the original probit model that tests the influence of national level factors on audit quality, the author considers that earnings management may be less opportunistic practice and may be acceptable to auditors and listed companies in county with a common law tradition, low level of corruption and good corporate governance. Therefore, audit firms from Malaysia and Singapore are more able to tolerate their audited companies' earnings management than those from Indonesia, the Philippines and Thailand.

9.3.3 THE INFLUENCE OF FIVE INSTITUTIONAL FACTORS CHOSEN FROM THE RESULTS OF THE INTERVIEW ON AUDIT QUALITY

Since the eight institutional factors are introduced into the original probit model in this robustness test, this section revisits the influence of institutional factors chosen from the results of the interview on audit quality as already discussed in Section 9.2.3.1. The robustness test of $EngLsh$, $InspecAF, ListCom\ to\ AuFirm$, $AccAct$ and $ISQC$ 1 in this section and the test in Section 9.2.3.1 provide almost the same results of rejecting/accepting **Hypothesis$_0$**, apart from those of $EngLsh$.

The coefficients of $EngLsh$ in this section are significant at all levels of benchmark except for 10%. However, signs and trend of the coefficients of $EngLsh$ in this section are opposite to those in Section 9.2.3.1.1. The signs of the coefficients in this section are positive at benchmarks below 10% whilst they are negative at benchmarks above 10%. Increasing the benchmark continually decreases the value of the coefficient. From this opposition, there are different results between Section 9.2.2.1.1 and the robustness test here. Unlike the result of Section 9.2.3.1.1 that rejected **Hypothesis$_0$ 5**, the result of the robustness test accepts **Hypothesis$_0$ 5** that audit firms from a country where the language of the accounting standards is English have a lower probability for expressing unqualified audit opinions with clients' high levels of discretionary accruals. They have the high probability of being defined as a high quality audit provider at a low benchmark but the low probability of being defined as a high quality audit provider at a high benchmark.

Section 9.2.3.1.2 found that the coefficients of $InspecAF$ are significantly negative at benchmarks 0.5% and 1% and significantly positive at benchmarks 20% and 30%. However, the coefficients of $InspecAF$ are insignificant at benchmarks 2.5%, 5%, 7.5%, 10% and 15%. Therefore, in section 9.2.3.1.2, **Hypothesis$_0$ 6** that audit quality may be

promoted after an independent audit regulator was established was rejected. Unlike the finding of Section 9.2.3.1.2, this section found that the coefficient of $InspecAF$ is insignificant only at the benchmark of 5%. At other levels of benchmark, they are significantly negative. This indicates that an audit firm has a high probability of drawing unqualified audit opinions with clients' high levels of discretionary accruals even after an independent audit regulator was established. **$Hypothesis_0$ 6** is still rejected.

This section found that, except for the benchmark of 5%, the coefficients of $List\ to\ AuFirm$ are significant. Increasing the benchmark reduces the value of the coefficient. The coefficient is negative at benchmarks below 5% but positive at benchmarks above 5%. This finding is evidence that audit firms from a country with a low proportion of listed companies to registrant audit firms have a high probability of issuing unqualified audit reports with clients' high levels of discretionary accruals. This supports Section 9.2.3.1.3 that **$Hypothesis_0$ 7** is rejected.

The coefficients of $AccAct$ are found to be significant at benchmarks below 10% and to have a negative sign. This shows that after an accounting Act was imposed an audit firm still has a high probability of issuing unqualified audit reports with clients' high levels of discretionary accruals if the accepted levels of discretionary accruals are less than 10% of lagged total assets. If the accepted levels of discretionary accruals are greater than 10%, there is no difference in this probability before and after an accounting Act was imposed. Similarly to Section 9.2.3.1.4, **$Hypothesis_0$ 8** is rejected.

The robustness test also found that at all levels of the benchmark, $ISQC1$ has an insignificant coefficient. This means that an audit firm's probability of expressing unqualified audit opinions with clients' high levels of discretionary accruals is not different before and after ISQC1 was adopted. **$Hypothesis_0$ 9** is still rejected as it was rejected in Section 9.2.3.1.5.

To summarise, the robustness tests in this section provide most similar results to those in Section 9.2.3.1. **$Hypothesis_0$ 6**, **7, 8** and **9** are still rejected. However, **$Hypothesis_0$ 5** is accepted in this section but is rejected in Section 9.2.3.1.

9.3.4 THE INFLUENCE OF FIRM AND ENGAGEMENT LEVEL FACTORS ON AUDIT QUALITY

Similar to section 9.3.3, this section revisits the influence of firm and engagement level factors on audit quality as already discussed in Sections 9.2.3.2, 9.2.3.3 and 9.2.3.4. Robustly testing the influence of firm level factors on audit quality in this section provides findings that are consistent with those in Sections 9.2.3.2 and 9.2.3.3. The robustness test found that the coefficients of $DummyAud$ are insignificant only at the benchmarks 7.5% and 10%. They have a positive sign at benchmarks below 7.5% but a negative sign at benchmarks above 10%. This finding is almost identical to Section 9.2.3.2. Hence, it strengthens the finding that big firms have a lower probability of drawing an unqualified audit opinion with a client's high level of discretionary accruals than non-big firms.

The findings of $ChangeAud$, $Tenure$, ROA, $DtoE$ and $natTA$ are also similar to those of Sections 9.2.3.3 and 9.2.3.4. The coefficients of $ChangeAud$ are significant at benchmarks of 0.5%, 1%, 2.5% and 10% and have a positive sign. This indicates that we can capture the differences in qualities from the switching of an audit between types of audit firm if we use discretionary accruals at 0.5%, 1%, 2.5% and 10% of lagged total assets as the benchmark for assessing audit quality. This supports the finding of Section 9.2.3.3 that there is a difference in audit qualities between types of audit firms.

At all levels of benchmark, $Tenure$ has a positive sign of coefficient and is significant except for 0.5%. This is almost similar to the result of Section 9.2.3.3 that each year more that a listed company employs the same type of audit firm as its auditor, the audit firm's probability of issuing an unqualified audit report with a high level of discretionary reported by a client increases. This indicates that audit quality does not only vary according to types of audit big/non-firm but also vary from individual firm to individual firm.

Robustly testing the influence of engagement level factors in this section also provides findings that are similar to those in Section 9.2.3.4. The coefficients of $DtoE$ remain insignificant at all levels of benchmark in this section. At all levels of benchmark, $natTA$ is also found to have a positive sign of coefficient and be significant. This reaffirms Section 9.2.3.4 that an audit firm may be more tolerant of discretionary accruals reported by a large audited company. Similarly to Section 9.2.3.4, at benchmarks above 5%, ROA is found to have a significant coefficient with a positive sign. This strengthens Section

9.2.3.4's finding that an audit firm's probability of issuing unqualified audit reports with a high level of discretionary accruals increase when its audited companies have a high performance.

Section 9.3.4 strengthens the Section 9.2.3.3's and 9.2.3.4's findings that firm level factors lead audit quality to vary according to types of audit big/non-big firm and even vary from individual firm to individual firm. Moreover, engagement level factors also lead audit quality to vary from individual audit engagement to individual audit engagement.

9.4 CONCLUSION

Chapter 7 was closed with the question of why audit firms from Malaysia and Singapore are more tolerant of discretionary accruals than those from Indonesia, the Philippines and Thailand even though Malaysia and Singapore are perceived to have a higher level of investor protection than Indonesia, the Philippines and Thailand. The interviews in Chapter 8 were then conducted in order to identify the factors that may lead to the differences in audit qualities at a national level. From factors identified by the interviewees in Chapter 8, five institutional factors are chosen to test their influences on audit quality. They are introduced into the original probit model.

From the results of tests, there remains a need for further observing the influence of the language of the accounting standards, an independent audit regulator and ISQC1 on audit quality. However, an accounting Act is found to be less effective in promoting audit quality in Southeast Asia whilst a limited number of registrant audit firms may not be the constraint on promoting audit quality.

After introducing eight institutional variables into the test, the results of the test lead the author to cast doubt on the perception of earnings management. Earnings management may be perceived to be less opportunistic practice and to be acceptable to auditors and listed companies under a common law tradition, a low level of corruption and good corporate governance.

This chapter also highlights that firm and engagement level factors may outperform national level factors in promoting audit quality. Therefore, audit quality may vary

according to types of big/non-big audit firm, from individual firm to individual firm or even from individual audit engagement to individual audit engagement.

The test procedure of this chapter is similar to that of Chapter 7. Therefore, the validity of this chapter's inferences about the influence of national, firm and engagement level factors on audit quality also depends on the effectiveness of the accrual models in capturing discretionary accruals and the effectiveness of our measure of audit quality.

CHAPTER 10

CONCLUSION

10.1 INTRODUCTION

The objective of this thesis is to investigate the association between earnings management and audit quality. It broadens evidence to Southeast Asia which is of interest in the context of international comparison. By employing the mixed methods approach, this thesis contributes new quantitative and qualitative evidence to the literature on earnings management and audit quality. For the quantitative evidence, a new probit model and a new measure of audit quality were developed to test the general notion that big firms have higher audit quality than non-big firms and also to identify firm and institutional factors that influence audit quality. In this test, the initial sample is panel data of 2,148 listed companies from Indonesia, Malaysia, the Philippines, Singapore and Thailand, which covers the periods from 1992 to 2011 with a total of 20,757 firm-year observations. The results of the probit model are strengthened and expanded by qualitative evidence from 16 interviews with some key stakeholders of audits from Malaysia, Singapore and Thailand. The final empirical test introduces national level factors in promoting audit quality identified by the interviewees and other interesting institutional variables into the probit model.

The findings of each research question are discussed as follows. The limitations are discussed in Section 10.10.

10.2 THE GOOD SIDE OF EARNINGS MANAGEMENT

Researchers' perspectives (Beneish, 2001) and specific objectives of empirical studies (Goncharov, 2005) lead the term *earnings management* to be defined in different ways. Hence, the precise definition of earnings management remains debatable.

Interestingly, the term *earnings management* is less familiar in Southeast Asia. Its definition explained by different stakeholders in the audit process is an activity that is done in compliance with GAAP, laws and regulations and with the honest intention to safeguard

the stakeholders' interests. This indicates that GAAP, laws and regulations and intention are used to draw a line between earnings management and fraud. Therefore, creative accounting, cooking the books, the use of loopholes in accounting standards, grey accounting areas or manipulating financial statements can be considered to be either earnings management or fraud.

From the interviews in Chapter 8, this thesis defines earnings management as an activity that is done in compliance with GAAP, laws and regulations and with the honest intention of safeguarding the stakeholders' interests. This definition differs from its extant definition provided by previous studies. The difference is due to the fact that this thesis's definition of earnings management is developed from the perceptions of some key stakeholders of an audit, with the result that this definition of earnings management highlights the good side of earnings management rather than its bad side as in previous studies.

This thesis suggests that future studies should define the term *earnings management* with care since the consensus understanding of earnings management amongst the stakeholders of an audit remains open to question.

10.3 AUDITOR SCEPTICISM

Previous studies defined earnings management as an accounting treatment that might lead financial statements not to be presented fairly. Also, many previous studies used discretionary accruals to measure audit quality (i.e. Chung and Kallapur, 2003; Myers, Myers and Omer, 2003; Carey and Simnett, 2006; Reichelt and Wang, 2010). Their assumption is that the higher the level of discretionary accruals the audited financial statements has, the lower the audit quality. Thus, it can be implied that the auditor is expected to detect earnings management by limiting discretionary accruals to an acceptable level.

However, this thesis provides contradictory findings to previous studies. Its empirical evidence indicates that, as a result of audit firm type tenure, discretionary accruals might not be adjusted by the audit firms and, in turn, might accumulate over time. This casts doubt on the question of whether earnings management is detected by the auditor or whether earnings management is acceptable to the auditor. Importantly, according to the interviews, although earnings management in this thesis is given a positive meaning, there

remains a lack of any consensus view on the auditor's responsibility to limit earnings management among regulators. The interviewees' view is that since earnings management is the use of judgement in accounting and reporting and auditors are required by the auditing standards to test the reasonableness of the management's judgement in significant accounting areas, the auditors are therefore expected to detect earnings management. Contrary to the first view, the other view is that as long as the primary responsibility of the auditors is not to detect fraud, the auditors are not responsible for detecting earnings management either.

Even though dealing with earnings management is perceived to be a difficult task for auditors, audit firms themselves believe that their existing audit methodologies are capable of limiting earnings management. An individual's judgement and scepticism are deemed to be the most important features of auditing that improve the effectiveness of an audit to limit earnings management. Interestingly, the audit committee is expected to be one of the key mechanisms to stop companies from performing opportunistic earnings management at the expense of other stakeholders.

The author believes that even though the auditor's legal responsibility is not primarily to detect earnings management or fraud, the auditor is required, at least, to exercise his/her scepticism toward earnings management and make his/her judgement on whether earnings management leads the financial statements to be presented fairly. Since detecting earnings management depends on the auditor's scepticism and judgement, the individual auditor is very important in detecting earnings management. The audit committee may also be an effective internal function that is able to limit earnings management.

10.4 IS THERE A "BEST" ACCRUALS MODEL?

The authors of empirical studies of earnings management believe that, unlike non-discretionary accruals that naturally occur in the normal course of business, discretionary accruals are accruals that are influenced by management's motivation for earnings management and accruals that cause reported earnings to vary from neutral earnings. Discretionary accruals are therefore used as a proxy for earnings management.

To detect earnings management through the investigation of discretionary accruals, the aggregate accruals approach that can capture discretionary accruals of many accounts and

deal with a large sample size is widely used in empirical studies. This approach can be classified into complicated econometric models (i.e. the Jones Model, the Modified Jones Model, the Industry Model and the DD Model) and statistic accrual approaches (e.g. the Healy Model, the DeAngelo Model and the McNichols Model). However, simple statistical models are less popular than the econometric models because unusual circumstances in the base year may lead to predictions of the current year's accruals having errors.

Even though empirical studies (e.g. Dechow et al., 1995; McNichols, 2000; Batov et al., 2001; Dechow et al., 2012) have tested the effectiveness of existing accruals models in detecting discretionary accruals, the best accruals model remains unclear. Moreover, the selection of accruals model depends on the study's objectives (McNichols, 2000) and hypotheses (Dechow et al., 2012). For this thesis's purpose, the cross-sectional version of the Jones Model (1991), which is also used by empirical studies of the association between audit quality and earnings management (e.g., DeFond and Subramanyam, 1998; Becker et al., 1998; Krishnan, 2003; Myers et al., 2003; Piot and Janin, 2007) and the multinational study of Haw et al. (2004), is selected.

10.5 AUDITOR STAKEHOLDERS SEE QUALITY DIFFERENTLY

Similarly to the term *earnings management*, the term *audit quality* remains unclear. The definition of the term *audit quality* varies from individual to individual according to their role in the financial reporting process. As commented on by the Financial Reporting Council (2006), there is still no perfect definition that could be used as a guideline to evaluate real audit quality. For their studies' purposes, empirical studies (i.e. Lu, 2006; Gaver and Perterson, 2007; Gul et al., 2009; and Yu, 2011) defined audit quality as an auditor's ability to detect material misstatement. This definition of audit quality seems to be only one dimension of the view that sees audit quality from the perspective of investors and from the output of an audit. However, the author believes that audit quality should be seen from the perspectives of all stakeholders of the audits and from both the process of audit and its outputs. Therefore, the author extends the definition of audit quality by exploring the views of some key stakeholders of the audits.

As a result of the interviews, a quality audit is defined as an audit that complies with generally accepted auditing standards and helps an auditor deliver value added benefits to

an audited entity. It also provides the public with a reliable audit report and a credible set of financial statements that presents an audited company's financial position and performance. However, the thesis concludes that audit quality remains difficult to measure.

10.6 IS THERE A "BEST" MEASURE OF AUDIT QUALITY?

In the code of ethics for professional accountants, an audit is a confidential process. Therefore ex-post data of the audit from the audit report and financial statements are used by empirical studies to measure audit quality. These measures of audit quality are, for example, discretionary accruals (e.g., Jeong and Rho, 2004; Carey and Simnett, 2006; Maijoor and Vanstraelen, 2006; Piot and Janin, 2007; and Reichelt and Wang, 2010), the incidence of issuing going-concern auditor reports (Carey and Simnett, 2006; Reichelt and Wang, 2010), the audited client's propensity to report earnings that meet a benchmark (Carey and Simnett, 2006), the results of independent parties' inspections of audit firms (Hilary and Lennox, 2005) and the restatement of prior year financial statements (Kinney, Palmrose and Scholz, 2004). These measures of audit quality are quantitative indicators of audit quality that can be observable but may be less effective in assessing audit quality. They might not really reflect the quality of the audit process. Measuring audit quality through the audit firm inspection seems to be the only really effective way of evaluating audit firms' audit processes.

The results of the interviews indicate that, owing to their different roles in the process of an audit, the stakeholders of the audits define and measure audit quality differently. The audited entities use the individuals' talent and ability, the management letter that auditors use to report to the audited entities on their internal control weaknesses found by the auditors, and the time frame for completion of an audit to assess the quality of an audit process. They also perceive that, owing to an audit firm's good technical team and global network, the audit firm will provide them with a high quality audit. On the other hand, audit firms and regulators use the applicable auditing standards as the benchmark to evaluate audit quality. They also deem that audit firm inspection is the most important measure of audit quality. The regulators also focus on an audit firm's management and structure whilst the audit firms use their quality control system, auditor reputation and lack of lawsuits against an audit firm as the key indicators of their audit quality. In addition, satisfaction surveys are deemed by the audit firms and audited companies to be their most

important assessment tool of audit quality. Interestingly, there is doubt that the standardised patterns of an audit report may be effective in measuring audit quality.

Qualitative measures of audit quality identified by the interviewees seem to be very subjective and insubstantial; therefore, they are difficult to use in practice. Some of them might be an effective measure if the public can access inside information. The author believes that, among all qualitative measures of audit quality identified by the interviewees, the audit firm inspection undertaken by the independent regulator seems to be the best one.

This thesis does not provide clear evidence for the best measure of audit quality. It supports previous studies' comments that, as long as there is still no universal definition of audit quality, measures of audit quality vary according to the different roles in an audit process. For the purposes of this thesis, audit quality is measured by the type of audit opinion and the level of earnings management through reported discretionary accruals. Unlike previous empirical studies' presuppositions that a high level of either signed or unsigned discretionary accruals indicates a low level of audit quality (i.e. Becker et al., 1998; Bauwhede, 2003; Jeong and Rho, 2004; Piot and Janin, 2007), the author believes that audit quality is not impaired if the level of reported discretionary accruals is lower than the level of audit materiality. In other words, there might be a level of reported discretionary accruals that does not alter the auditor's unqualified opinion. Hence, the author's assumption is that the higher the level of reported discretionary accruals accepted by the audit firm, the lower the level of audit quality.

10.7 DO BIG FIRMS GIVE BETTER QUALITY AUDITS?

In general, audit firms are classified into one of two categories: a big firm or a non-big firm. The employment of a big firm is beneficial for audited entities except for the cost. For example, employing a big firm enables newly listed companies to gain high credibility for their published financial information and, in turn, to succeed in reducing their cost of capital (Pittman and Fortin, 2004). Investors also rate bonds issued by companies with a big firm auditor higher than those issued by companies with a non-big firm auditor (Mansi et al., 2004). On the other hand, with its auditor reputation, big firms are selected by reputable companies (Bar-Yosef and Sarath, 2005). The big firms also suffer serious consequences if audit failure occurs, for instance the cases of Arthur Andersen (Chaney and Philipich; 2002) and KPMG in Germany (Weber et al., 2008). The big firms therefore

have a greater incentive to maintain their reputation and avoid misreporting, and are therefore more concerned with their audit quality.

This thesis's empirical evidence from Southeast Asia supports the general belief that big firms are of higher audit quality than non-big firms. Importantly, the author does agree with the previous studies' inference that maintaining its reputation and avoiding the consequences of an audit failure may lead a big firm to be less tolerant of earnings management through discretionary accruals. This might also imply that big firms are more conservative than non-big firms, and, because of this, the public may perceive big firms as high quality audit providers. In addition, this thesis's finding is evidence that big firms help limit earnings management.

According to the results of the interviews, some key stakeholders of the audits and the big firms themselves perceive that big firms have higher quality than non-big firms. They believe that big firms have greater resources than non-big firms. Resources allow big firms to be able to invest more in people, technical support functions, training programmes and technologies. Reputation also increases big firms' chance to recruit high-quality staff. Interestingly, there is evidence that mid-tier firms see themselves as having the same level of audit quality as big firms since mid-tier firms also have global standard audit methodologies. This raises doubt as to whether the classification of audit firms just into a big firm and a non-big firm is still valid since mid-tier firms are growing in importance. However, this thesis still classified mid-tier audit firms as non-big firms because of their small market share in this region.

The probit model test provides evidence that the audit quality of big firms might vary from firm to firm even within one country or across countries. This is consistent with the view of listed companies that employed a big 4 audit firm as their auditors. From these listed companies' experiences in selecting their audit firms, they found that there is a difference in level of competence and audit quality within the big firm group. The quantitative and qualitative evidence from this thesis supports the finding of Maijoor and Vanstraelen (2006) that the same big firm in different countries might have different levels of audit quality. It can also be evidence that national level factors significantly influence audit quality.

Evidence from this thesis supports the general notion that big firms are of higher quality than non-big firms. It also points out that big firms are not homogeneous in terms of audit quality. Therefore, future researchers may consider distinguishing between different big firms. Moreover, the dominance of big firms can and does vary across the countries. For example, KPMG is the most dominant in Indonesia whilst E&Y is the most dominant in Thailand, Malaysia and Singapore. D&L is the least dominant in Thailand, the Philippines and Malaysia. This unequal dominance of big firms may affect the results that are obtained from the probit model test. This is because, for the probit model test, big firms are hypothesised to be homogenous in terms of their dominance. This unequal dominance of big firms may also mislead the author about the classification of the audit firm type. For example, since D&L is the least dominant in Thailand, the Philippines and Malaysia and its dominance may not differ from other non-big firms, D&L should be classified as a non-big firm rather than a big firm in these three countries. This misclassification would impair the results of this thesis because for this thesis's purpose D&L is defined as a big firm in all countries.

10.8 DO LONG AUDITOR TENURE AND ROTATION AFFECT AUDIT QUALITY?

Regulators worry that long audit tenure impairs audit scepticism and even audit quality; therefore, some have imposed mandatory audit partner/firm rotation on listed companies. However, there is much prior evidence that mandatory audit partner/firm rotation causes many negative impacts rather than promoting audit independence and audit quality. The negative side effect of mandatory audit partner/firm rotation is that audit quality can be lessened because the new audit firms lack specific client knowledge (Johnson et al., 2002) or even industry expertise (Gul et al., 2009) in the first few years of their audits. Therefore, the quality of financial reports is weakened as a consequence of a short audit-firm tenure (less than three years) (Johnson et al., 2002; Gul et al., 2009). Audit partner/firm rotation may increase unexpected costs among all parties in a capital market (Ghosh and Moon, 2005) or lead a bond market to perceive companies that switch auditor as riskier firms (Mansi et al., 2004).

In the literature, some authors found that long audit firm tenure does not reduce audit and/or earnings quality (e.g. Myers et al., 2003). However, some reported that long audit partner tenure impairs audit quality only if audit quality is measured by the auditor's

propensity to express a going-concern opinion, and by the likelihood that an audited client reports favourable earnings (e.g. Carey and Simnett, 2006). There is also evidence that the company cannot take advantage of auditor switching for opinion shopping because of the new auditor's and the stock market's reaction to the change in auditor (Lu, 2006).

The empirical results in this thesis were that long audit firm tenure either with a big firm or a non-big firm impairs audit quality and switching audit firms helps promote audit quality only at small accepted levels of discretionary accruals. This suggests that mandatory audit firm rotation may help promote audit quality only when the successor audit firms are more conservative in their first year audits of new clients. By considering the previous studies' findings with the results of this thesis, we can infer that audit firms may have incentives to maintain their clients and are therefore more tolerant of their clients' earnings management, especially clients with high performance and/or that are large in size. This impairs audit quality. To address the issue that long audit tenure impairs audit quality, there may be a need to impose mandatory audit firm rotation, not just mandatory audit partner rotation within an audit firm. Rotation of audit firms may lead other stakeholders to pay more attention to audit firm change; therefore, audited companies cannot take advantage of switching their auditor.

However, the interview results lead us to question the assertion that long audit tenure impairs audit quality. Long audit tenure is seen to have both pros and cons. It may create familiarity and close relationships between an auditor and a client, and, in turn, undermine professional scepticism and impair audit independence. Conversely, long audit tenure might also be beneficial for an auditor to develop him/herself into an expert in audits of a specific industry. This could finally help audit firms reduce the cost of an audit and even help audited companies reduce expenses.

To militate against the negative perception that long audit tenure may undermine audit quality, the existing mandatory audit partner/audit team rotation is deemed by the interviewees from Malaysia, Singapore and Thailand to be more appropriate than mandatory audit firm rotation. Disadvantages of audit firm rotation are raised, for example wasting time and resources on the process of understanding a client's business, taking advantage of audit firm rotation by moving to an audit firm with a lower audit fee and a lower level of audit quality, and rotation being difficult to adopt in countries with a limited number of registrant audit firms. On the other hand, the advantages of audit partner/team

rotation are given, for example maintaining an audited client and specific audit knowledge of and experience in that client, allowing an audit of that client to be performed by a fresh pair of eyes, and saving time. There is also a belief that the audit firms' systems for dealing with the threat to audit independence, and the audit firms' cultures and individuals, significantly affect the effectiveness of the policy on audit partner/team rotation. The audit firms' systems for dealing with the threat to audit independence help them to ensure that auditor independence is not impaired even when they provide one audited company with an audit service for many consecutive years. However, the audit firms' cultures and individuals may undermine the effectiveness of audit partner/team rotation. For instance, although there is audit partner/team rotation, the previous audit partner/team still influences the current audit partner/team's decision-making on issues found by the current audit partner/team. In spite of the inferences on the influences of long audit firm tenure on audit quality that have just been mentioned, the author would like to highlight that these inferences are mostly based on the views of the audit firms.

Even though this thesis's quantitative and qualitative evidence for the influence of long audit tenure on audit quality is inconsistent, the thesis's evidence supports the implementation of the policy on periodic audit firm rotation in this region. This is due to evidence from the probit model test that switching of an audit between audit firms may lead the successor audit firm to be more conservative and therefore be less tolerant of earnings management in the first year audit after switching. Also, this is due to the limitation of the interviews that the interviewees may have biases against mandatory audit firm rotation. Therefore, the interviews reported mixed evidence for this.

10.9 THE IMPORTANCE OF ENGAGEMENT/FIRM LEVEL VERSUS NATIONAL LEVEL FACTORS

Previous studies identify and test the factors that might influence audit quality. These factors can be classified into national, firm and engagement level factors. There are also international level factors in promoting audit quality, for instance ISA 220, ISQC1 and *A Framework for Audit Quality: Key Elements that Create an Environment for Audit Quality* issued by the IAASB and the assessments of a country's accounting and auditing environment performed by the ROSC and ACGA.

Most of the previous studies were conducted in the US, where there is strong investor protection, and their findings are drawn only from quantitative evidence. However, the author believes that quantitative evidence alone may not give a clear understanding of audit quality, and that a study in countries which have weak investor protection may show different findings from studies in the US. Therefore, this thesis aims to provide both quantitative and qualitative evidence from Southeast Asia.

Although some data are not available (e.g. shareholding structure, audit fee, audit committee), this thesis tests the influence of several national and firm level factors on audit quality. It focuses primarily on the influence of audit firm type (i.e. Becker et al., 1998; Bauwhede et al., 2003; Jeong and Rho, 2004), investor protection (Hung, 2001; Leuz et al., 2003; Francis and Wang, 2008) and other national level factors. National and engagement level factors that are introduced into the test are listed below.

- According to the results of the interviews, the language of the accounting standards, an independent audit regulator, the number of registrants audit firm, an independent audit regulator, an accounting Act and ISQC1 are the key factors in promoting audit quality at a national level.

- This thesis also introduces other institutional variables: a legal Code or Common law (Hung, 2001; Haw et al, 2004); Islamic accounting practices; the corruption index (Wysocki, 2004); and the country score of ACGA's assessment of corporate governance, into the test.

- Audited firm size (Johnson et al., 2002; Kim et al., 2003; Myers et al., 2003); leverage (e.g. Becker et al., 1998; Jeong and Rho, 2004; Bauwhede et al., 2003); and performance (e.g. Kothari et al., 2005; Reichelt and Wang, 2010) are controlled to allow for the impact of engagement level factors on audit quality.

By testing a country's investor protection and using the degree to which audit firms are tolerant of earnings management without modifying their unqualified audit opinions as a measure of audit quality, the author found that, in comparison to audit firms from Singapore where the investor protection is strongest, those from Malaysia are more tolerant of earnings management whilst those from Thailand, the Philippines and Indonesia are less tolerant of earnings management. For example, from Table 13 on Page 179, if we use 7.5% of lagged total assets as the benchmark for measuring audit quality, Malaysian audit firms'

probability of issuing unqualified audit opinions to their clients which report discretionary accruals more than 7.5% of lagged total assets is approximately 55% higher than Singaporean audit firms. For those from Thailand, Indonesia and the Philippines, this probability is approximately 46%, 31% and 42% lower than Singaporean audit firms, respectively. This indicates that the audit firms from Malaysia are the most flexible whilst those from Thailand, the Philippines and Indonesia are the most conservative. This indication is evidence that national level factors significantly impact the audit firms' audit quality. Moreover, even though Leuz et al. (2003) point out that countries with low investor protection (e.g. Thailand, the Philippines and Indonesia) engage more in earnings management, this thesis adds evidence that auditors from these countries may be effective in limiting earnings management in comparison to countries with high investor protection (e.g. Singapore and Malaysia).

From the further tests of why audit firms from Malaysia and Singapore are more tolerant of discretionary accruals than those from Thailand, the Philippines and Indonesia and how national level factors influence audit quality, we can draw the following conclusions.

- Even though some key stakeholders of the audits from the interviews opined that the language of the accounting standards may impact audit quality since the translation of the international accounting standards into non-English languages leads to a delay in adopting these accounting standards, the tests provide inconsistent evidence. The main test rejected this hypothesis; however, the robustness test accepted it. This raises doubt as to whether the adoption of all international accounting standards is appropriate to different institutional environments in all countries. Some local accounting standards and practices should be allowed if the international ones lead to negative consequences. In addition, the differences in non-English accounting standards and Islamic accounting practices from the international accounting standards indicate that the harmonisation of the accounting standards in Southeast Asia has not succeeded yet.

- An independent audit regulator who is a member of IFIAR and takes responsibility to inspect a registrant audit firm, a legal accounting Act and the implementation of ISQC1 may not raise the audit firm's motivation to promote audit quality. This calls into the question whether monitoring and inspecting audit firm quality is effective enough to raise audit firms' awareness of audit quality. Acts and regulations imposed by securities regulators rather than a legal accounting Act help

promote audit quality amongst registrant audit firms. However, a limited choice of audit firms and listed companies' thorough process of selecting an auditor may force the registrant audit firms to be more concerned with their audit quality and be aware of audit failure. In addition, unlike with a large number of registrant audit firms, a small number of registrant audit firms may allow a regulatory body to effectively and efficiently monitor and control audit firm quality.

- Common law tradition is found to help promote audit quality at a national level. For example, from Table 20 on Page 290, the probability that audit firms from a country with a common law system would issue unqualified audit opinions to their clients which report discretionary accruals lower than 5% of lagged total assets is approximately double that for a country with a code law system. However, if discretionary accruals are greater than 7.5% of lagged total assets, their probability is approximately 100% lower than those from a country with a code law system.

- Interestingly, audit firms from a country with a lower level of corruption are found to be more tolerant of earnings management. For example, from Table 20 on Page 290, their probability of being defined as high quality audit firms is 100% lower than those from a country with a higher level of corruption if discretionary accruals are lower than 5% of lagged total assets, but 100% higher than those from a country with a higher level of corruption if discretionary accruals are higher than 10%.

- Conversely, audit firms from a country with practical and well-written policies, effective enforcements, regulations and laws that aim to promote good corporate governance, especially in a capital market, are found to be less tolerant of earnings management. If discretionary accruals are lower than 10% of lagged total assets, the probability that audit firms from a country with high scores for these corporate governance indicators would issue unqualified audit opinions to their clients is approximately 80-100% higher than those from a country with low scores.

- Owing to these findings, we ask whether earnings management can be an acceptable practice in a good accounting environment (e.g. low level of corruption, a good environment for corporate governance and a strong investor protection). If

so, we should also ask whether earnings management measured by discretionary accruals is a good proxy for audit quality and whether the extant definition of earnings management remains valid.

Before leaving this section, the author does highlight that conducting research across countries is challenging, in particular, owing to the difficulties of comparing and interpreting the results from different environments. In addition, as found by the author, Haw et al. (2004) and Francis and Wang (2008), there are correlations amongst institutional variables that cannot be explained and still need future observations. This is, for example, in Chapter 9, we find a positive correlation between the presence of an independent audit regulator and the adoption of ISQC1; however, we still cannot give the explanation for this correlation. From the probit model tests in Chapters 7 and 9, we are unable to explain why the audit firms from Indonesia are less likely to issue a clean audit report in comparison to other countries. Collecting qualitative evidence for multinational study in Chapter 8 is also challenging, especially, owing to time and budget constraint, and cultural differences. These challenges are, for example, how the author makes a decision to select countries for conducting the interviews, and how the author interprets the results of the interviews.

10.10 LIMITATIONS OF THE STUDY

This section summarises the major limitations of the study in Chapters 7, 8 and 9. Importantly, the interpretations of this thesis's inferences must be made with care and must be considered with the limitations of the study in this section. The most important limitation of the study in this thesis is that the definitions of the terms *earnings management* and *audit quality* remain unclear. Precise proxies for earnings management and audit quality are therefore also absent. In this thesis, for the interpretations of the probit model's results, earnings management is an accounting treatment that is influenced by management's intention not to report neutral earnings (Schipper, 1989; Healy and Wahlen, 1999; and Dechow and Skinner, 2000). This meaning of earnings management is found to be different from the views of the interviewees that provide a positive meaning of earnings management. Different meanings of earnings management leads to the different interpretations.

To evaluate audit quality, the author tests the degree to which audit firms can be tolerant of earnings management without modifying their unqualified audit opinion. The test's assumption is that the more the audit firms can be tolerant of discretionary accruals without modifying their unqualified audit opinion, the lower the audit quality. In doing so, similarly to Haw et al. (2004), the author uses cross-sectional Jones (1991) discretionary accruals as a proxy for earnings management. Therefore, the validity of this thesis's inferences depends on the effectiveness of the cross-sectional Jones (1991) model in capturing discretionary accruals. The author also uses the percentage of lagged total assets as the materiality level or benchmark to evaluate audit quality. However, in reality, the setting of audit materiality is complicated and varies from individual to individual.

Some quantitative data is inaccessible. Thus, some variables of the probit model are estimated values. Due to the fact that the author used company/year level data, the pseudo R^2 of the probit model is low. A low pseudo R^2 of the probit model may be criticised as showing low reliability of the probit model. However, this thesis addressed this problem by testing the model with nine different accepted levels of discretionary accruals and observed the trend of the coefficients.

The major limitation of the interviews is that three of five countries were selected to conduct the interviews and the author/interviewer could not arrange the interviews with all potential participants. Therefore, this limitation might lead to difficulty in comparing the views of the interviewees within the same category but in different countries. Importantly, some interviewees might bias the answers of interview questions.

10.11 FUTURE RESEARCH

In the future, researchers should conduct studies with the following focuses.

- Listed companies which employed the big 4 audit firms stated that audit firms within a big 4 group have different levels of competence and audit quality. Hence, studies should compare audit quality among the audit firms within a big firm group in Southeast Asia.

- There is evidence that the effectiveness of policy on audit partner/team rotation also depends on the audit firms' cultures and individuals. Therefore, how national

culture, organisational culture or individuals impact audit quality should be explored.

- There is a need for more study of the impacts of an independent audit regulator and the adoption of ISQC1 in Southeast Asia. Most countries in this region are in the start-up period of an independent audit regulatory body that is a member of IFIAR and the implementation of ISQC1. The Singaporean independent audit regulator has been effective from 2004. Thailand and Malaysia established their independent audit regulators in 2010 whilst the Indonesian independent audit regulator was set up in 2013. As of 2014, the Philippines still lack an independent audit regulator. All countries except for Thailand adopted ISQC1 in 2010. Thailand has adopted it from 2014 onwards.

- Promoting good corporate governance as well as audit firm type is the key factor that ensures audit quality. Researchers should pay attention to which features of corporate governance influence earnings management and audit quality. These features are, for example independent directors, the audit committee, shareholders' rights, and the requirements for the disclosure of specific information and events. Data on these features should be at a firm level and the test should also be performed in the context of an international comparison.

- Curbing earnings management should be from an individual auditor's judgement and scepticism whilst promoting audit quality should be done at both engagement and firm level. Future researchers should conduct experiments to test how the individual auditor in Southeast Asia exercises his/her scepticism and makes his/her judgement on earnings management.

- Testing the influence of engagement and firm level factors on audit quality is also of interest. The engagement level factors are, for instance, the review process, the audit team and time allocated to each audit engagement. The firm level factors are, for example, training, staff recruitment policy, and technology. Data should be at engagement and firm levels and the test should include both big firms and non-big firms and provide evidence across countries.

10.12 SUMMARY

Adopting a mixed methods research approach in this thesis enables the author to obtain a richer and deeper understanding of audit quality. The author believes that solely using quantitative or qualitative evidence may mislead researchers over the association between earnings management and audit quality. As we see the conclusions in Sections 10.2-10.9, sometimes there is the inconsistency between quantitative and qualitative evidence. Evidence for this is, for example, the inconsistency between quantitative and qualitative evidence of a policy for mandatory audit firm rotation. Sometimes quantitative and qualitative evidence support each other, for example, evidence for the differences in audit quality between big firms and non-big firms. Sometimes qualitative evidence helps the author gain more understanding of earnings management and audit quality, for example, definitions of earnings management and audit quality. Importantly, our qualitative evidence provides us a good side of earnings management. This leads the author to cast doubt on the effectiveness of using earnings management through discretionary accruals as a measure of audit quality in previous empirical studies. This is because all these studies believe that the lower the discretionary accruals, the higher the audit quality. However, from this thesis's definition of earnings management, this belief is invalid.

This thesis is closed by the conclusion that in Southeast Asia, big firms are of higher audit quality than non-big firms. This is probably because big firms are more concerned with their reputation and the serious consequences of an audit failure and are perceived to have greater resources. Future research may need to consider classifying audit firms into big, mid-tier and local firms if mid-tier firms have a large market share. A common law tradition and corporate governance are the most important factors that help promote audit quality at a national level. Importantly, with a low level of corruption, these two factors may lead to effective earnings management, not opportunistic earnings management. This opportunistic earnings management may lead discretionary accruals not to be a good proxy for audit quality. Therefore, any study of the association between audit quality and earnings management should carefully define the term *earnings management* and use an appropriate measure of audit quality. If not, this future study may provide invalid inferences.

The author does underscore the fact that, in Southeast Asia, firm and engagement level factors rather than national level factors significantly promote audit quality and increase

the probability for detecting earnings management. In addition, mandatory audit firm rotation is effective in promoting audit quality.

APPENDICES

APPENDIX 1: INTERVIEW GUIDELINE

PARTICIPANT INFORMATION SHEET

Earnings Management and Audit Quality: Evidence from Southeast Asia

What is the aim of the research?

This study aims to contribute to the literature on audit quality and earnings management by broadening evidence to Southeast Asia and providing a new measure of audit quality, and to test whether a big firm is of higher quality than a non-big firm and whether national level factors have an influence on audit quality. The study does not aim to uncover earnings management.

Why have you been invited to take part?

You are being asked to participate as I am recruiting 21 people from Thailand, Malaysia and Singapore who have a good experience in auditing or who are involved in audit process or auditing system from different firms/organizations in each country.

What does taking part involve?

If you agree to participate, an interview will be conducted and will take approximately 1 hour. I will visit you at your office or other public places to conduct an interview at a date and time that would best suit you. I will ask your permission to record the interview. If you decide not to be recorded, I will take notes instead.

The withdrawal from the study is only possible prior to the completion of my thesis or the publication elsewhere.

What kind of information will be collected in the interview?

The followings are all open-ended questions:

- What is audit quality? How do you measure audit quality? Which factors lead to audit quality?
- Do you think a big firm and a non-big firm are different in term of audit quality? How are they different? Why are they different?

- Do you think allowing an audit firm to provide audit services to one client for a long period of time impairs audit quality? How does it have an impact on audit quality? Why does it have an impact on audit quality?
- Do you think switching audit firms can help promote audit quality? How does it promote audit quality?
- How does your company select audit firms? How does the stock exchange/professional institution control and monitor auditors in term of audit quality?
- Do you think national level factors, for example a legal system, an accounting and auditing system, a low demand for high audit quality, a low incidence of regulatory inspection, and a low risk of auditor litigation lead to different levels of audit quality between countries? How do they affect audit quality?
- Do you know about the term "earnings management"? In your opinion, what is earnings management? Do you feel that it differs from fraud and material misstatement? How is it different? Why is it different? How does your audit firm develop audit methodologies for detecting earnings management?

What are the possible benefits?

The findings of my study will point to the ways that help promote audit quality in Southeast Asia. They will also highlight the role of auditors in promoting the transparency of financial information and disclosure in the stock markets. This study will also provide the definition of earnings management based on the interviewees' perspectives and also report how auditors and audit firms deal with earnings management.

How will the information you provide be managed?

All data will be treated anonymously and confidentially. The information will be only used to write up a PhD thesis and to publish articles in academic journals and conference presentations. When the study is completed, all the information will be destroyed. The confidential handling, processing, storage and disposal of data will comply with the 1998 Data Protection Act.

Who did the review of the study's ethical issues?

The research has been approved by the University Research Ethics Committee, University of York.

How can you obtain the results of the study?

In case you wish to have the results of this study, I will email you.

INFORMED CONSENT FORM

Project Title: Earnings Management and Audit Quality: Evidence from Southeast Asia

Contact details: Weerapong Kitiwong, PhD Candidate, University of York

The York Management School, Freboys Lane, Heslington, York, YO10 5GD, UK

This form is for you to state whether you agree to participate in the study. Please read and answer every question. For any more information, please do not hesitate to ask the researcher.

Please tick box

1. I confirm that I have read and understood clearly the information   sheet for this research and have had the opportunity to ask questions about the study. ☐

2. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving any reasons. ☐

3. I agree to participate in this study. ☐

4. I agree to the interview being audio recorded. ☐

5. I am aware that the information collected during the interview will be used to write up a PhD thesis, as well as journal articles and books ☐

6. I understand that all information collected during the course of the research project will be treated anonymously. ☐

7. I understand that the information obtained will be retained in locked filing cabinets in a storeroom in The York Management School, University of York and then will be destroyed when the study is completed. ☐

8. I wish to have the results of this study. ☐

Name of Participant   Date   Signature

Name of Researcher   Date   Signature

COVER LETTER

Date: /   /

Dear Sir/Madam

My name is Weerapong Kitiwong, a PhD student at the York Management School, University of York. I am conducting research on the association between earnings management and audit quality in Southeast Asia. The aim of my study is to understand the association between audit quality and earnings management. It also aims to highlight the role of auditors in promoting the transparency of financial information disclosure in the stock markets and also to identify national level factors that have a profound influence on audit quality.

I need your help and participation in the study. I believe that you will provide valuable perspectives on this important topic.

Please rest assured that all information will be anonymised with no personal identification to any specific individual or organization. Your name and your organization's name will not appear in any written report or future publications as outcomes of this study. If you wish, I would be very happy to provide you with the summary of findings once the study is completed.

I would be grateful if you would agree to be interviewed. Should you have any queries, or questions, please do not hesitate to contact me.

Yours Sincerely,

Weerapong Kitiwong

The York Management School, University Of York, UK
Supervisors: Dr Keith Anderson, Dr Shraddha Verma
PhD Student: Weerapong Kitiwong, Email: wk534@york.ac.uk , Cell Phone: +44 7585331550,
Address: Freboys Lane, University of York, Heslington, York, YO10 5GD

APPENDIX 2: RELATED PRESENTATION OF THIS THESIS

March 7, 2013

Weerapong Kitiwong
The York Management School
University of York
Freboys Lane
Heslington
York YO10 5GD

Dear Weerapong:

I am happy to tell you that we would like to accept your paper for presentation at the TIJA 2013 Symposium which will be held in Wuhan, China the 17-19th of May.

We have received 53 submissions and each one of the papers has gone through 2 stages of evaluation and I am pleased to let you know that your paper has passed those stages and is now in the hands of a reviewer who is asked to provide more detailed comments. We expect to receive those comments within 2 weeks and we will forward them to you as soon as we receive them.

I am sending you this notification earlier in order to give you the time to prepare your travel. We will start the symposium with a reception on Friday, May 17th and will continue for 2 days concluding with dinner on the 19th.

As we promised in the call for papers we will cover your travel expenses and the cost of 4 nights at the conference hotel up to $2,000 US dollars (based on receipts). We also want you to know that there is no registration fee, no charges for reception, and no charges for common food served for all participants.

The arrangement mentioned above for one of the co-authors. Other co-authors who may want to attend the conference are certainly welcome and we encourage them to do so. However, we will not be able to offer them the same package. For every co-author who attends the symposium we will be happy to cover the cost of the hotel for 4 nights, and of course provide the common activities at the conference, including receptions for food.

I would like to emphasize that accepting the paper for presentation at the symposium enhances its probability for publication in the TIJA, but that is not a guarantee. We usually expect presenters to revise their papers based on all the comments received at the symposium and then submit the revision. We then send it out to one reviewer only. Typically that reviewer comes back with a revise or accept. Only in rare occasions do we have a different outcome.

The partners at Wuhan are planning a two-day tour after the Symposium for anyone interested. We will have the program and the time table shortly posted on the Symposium website.

When feasible, we would like to know your arrival and departure time to Wuhan because we will provide that information to the hotel in order to facilitate your accommodation.

Thanks for submitting your paper and we look forward to your participation.

Sincerely,

A. Rashad Abdel-khalik

June 6, 2013

Weerapong Kitiwong
The York Management School
University of York
Freboys Lane
Heslington
York YO10 5GD

Dear Weerapong:

I want to thank you very much for your contribution to The International Journal of Accounting Symposium held in Wuhan.

As we all know, the success of the Symposium comes from the interaction among participants and your paper and presentation have generated much of that interaction. I trust that you found the feedback helpful, even if it were direct and at times harsh. It is always better to clean up issues among friends before disseminating the work to others.

The next stage is for you to revise the paper taking into account all the comments made by the discussant and the questions raised by other participants. When you successfully complete the revision that satisfies these considerations substantively, I would welcome resubmission of the paper. I wish to reiterate, however, that the decision on publishing will depend on the reviewer's comments and recommendations consistent with the policy of the journal and the contractual arrangement with the publisher. I realize that there is no perfect paper but I have no doubt that you would want to publish papers that contribute to the literature and that would add credit to you and for which you need not continue explaining weaknesses.

Once again, many thanks for a great contribution to the Symposium and for adding to my knowledge.

Best regards,

A. Rashad Abdel-khalik
Editor

telephone   4545 · *fax*

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