THE DETERMINANTS OF AUDIT FEES AMONG LISTED MANUFACTURING COMPANIES IN MALAYSIA

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DECLARATION

We hereby declare that:

(1) This undergraduate research project is the end result of our own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.
(2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
(3) Equal contribution has been made by each group member in completing the research project.
(4) The word count of this research report is 11,200.

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DEDICATION

We would like to dedicate this final year thesis to our parents and friends who give full encouragement, guidance and advice throughout this research study. We are glad to have their supports and motivation when we face challenges in completion of this research study.

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LIST OF ABBREVATIONS

ACR	Audit Client Risk
AF	Audit Fees
CP	Complexity
CPA	Certified Public Accountant
CS	Corporate Size
IAPC	International Auditing Practice Committee
IFAC	International Federation of Accountant
IFRS	International Financial Reporting Standards
ISAs	International Standards on Auditing
PF	Profitability
SOAF	Status of Audit Firm

PREFACE

Auditing is a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and established criteria, and communicating the results to interested users. Generally, the auditors will charge a certain amount of audit fees from their clients in order to compensate for the audit work. Malaysia regulators have required that audit fees must be disclosed in the company's annual report in accordance with Company Act 1965. It is because all the public listed companies are required to perform the audit function regardless whether it is provided by third parties or in house.

Listed manufacturing company plays a critical role in contributing to the growth of economic but there is still lack of guidelines regarding audit fees determinants in Malaysia listed manufacturing companies. Therefore, this study is aimed to investigate the determinants of audit fees among listed manufacturing companies in Malaysia and thus provides a better understanding on audit pricing decisions in Malaysia audit market.

This research is able to provide an insight to practitioners such as managers, auditors, regulators as well as future researchers on the determinants of audit fees which are profitability, corporate size, complexity, status of audit firm and audit client risk, as there is no solid evidence or research conducted in Malaysia about the audit fees among listed manufacturing companies.

ABSTRACT

The purpose of this study aims to examine the determinants of audit fees among listed manufacturing companies in Malaysia. A theoretical framework was constructed to test the relationship between audit fee determinants and audit fees with the adoption of five independent variables which are profitability, corporate size, complexity, status of audit firm and audit client risk. The analysis is based on a sample of 185 listed manufacturing companies covering a time period of five years comprising of year 2009 to year 2013. Secondary data collection method was employed in this study to obtain data from annual reports published on Bursa Malaysia. The data collected were subsequently used to analyze the relationship between the five selected independent variables and audit fees by conducting multiple regression analysis. This study revealed that there was no significant relationship between the profitability and audit fees whereby significant relationship was found between other independent variables (corporate size, complexity, status of audit firm and audit client risk) and audit fees. However, there are several limitations faced in this study which included the generalizability of the research finding and measurement tools used to define the independent variables. This study provides important insight to listed manufacturing companies in Malaysia into the determinants which are significantly related to audit fees charged by the auditors and helps auditors in pricing the audit services appropriately. Besides, regulatory bodies can use this research to regulate the practice of audit pricing. This study also contributes an improved research model that incorporated new variable (audit client risk) which is found to be significant associated with audit fees.

CHAPTER 1: RESEARCH OVERVIEW

1.0 Introduction

Chapter 1 provides a research overview which consists of five sections. Firstly, the research background will be discussed to introduce our research topic. Next, the problem statement will be present to highlight the issue occurred. Then, it followed by the research questions to guide the research arguments and the research objectives which address the purpose of this study. Lastly, the significance of the study as well as the chapter layout are included in this chapter.

1.1 Research Background

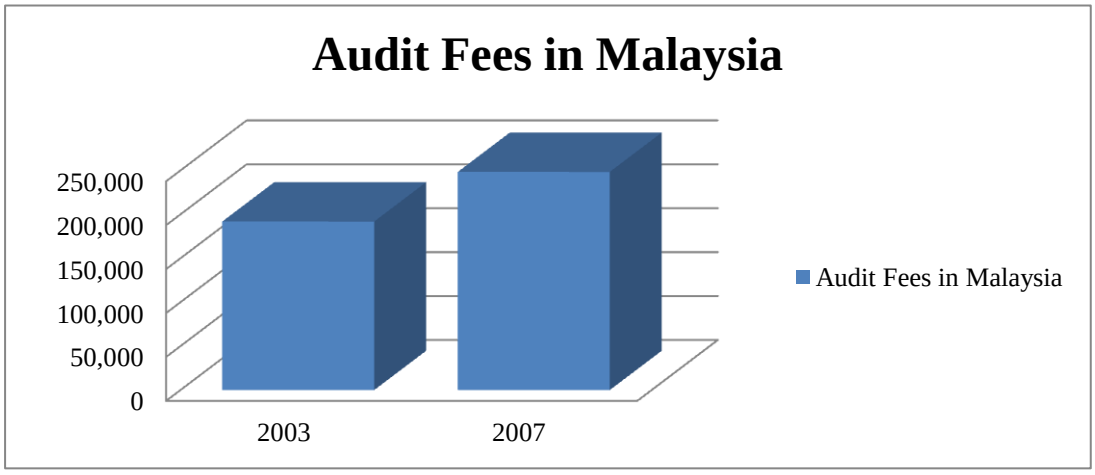
International Standards on Auditing (ISAs) as issued by the International Auditing Practice Committee (IAPC) of the International Federation of Accountant (IFAC) has been adopted as the basis for the approval of auditing standard and services in Malaysia (Sori & Mohamad, 2008). According to Shafie, Che Ahmad, and Ali (2007), Malaysia regulators have required that audit fees must be disclosed in the company's annual report in accordance with Company Act 1965. A "Recommended Basis for Determining Audit Fees" has been issued by MIA as a guideline on the charging of audit fees but the amount of fees paid depends largely on the audit skills, knowledge and time required in performing audit works (Paino & Tahir, 2012).

The regulation of auditing and accounting practices for the public disclosure of audit fees has put a greater pricing pressure on audit services which has a significant impact on the audit market (Swanson, 2008). According to Sundgren and Svanstrom (2013), the level of audit fees is usually in line with the audit quality (Ask & Holm, 2013). However, the amount of fees charged is often in

contra with the audit fees perceived by the client. Hence, it is important to know how audit fees are priced differently and whether the fees are charged reasonably within the auditing industry (Kwong, 2011).

Based on Figure 1.1, the audit fees charged by the auditors have increased in Malaysia. It is found that the average audit fees had been increased by 10 percent from year 1997 to year 1998 (Hariri, Abdul Rahman, & Che Ahmad, 2007). For example, the average audit fees in year 2003 was RM191, 875 (Yatim, Kent, & Clarkson, 2006) compared with RM248, 376 in year 2007 (Malek & Che Ahmad, 2012).

Figure 1.1: Audit Fees in Malaysia



Source: Yatim, Kent and Clarkson; Malek and Che Ahmad; Hariri, Abdul Rahman and Che Ahmad's study (as cited in Malek and Saidin, 2013).

1.2 Problem Statement

Audit pricing services have been an important issue that concern many researchers to have carried out researches by examining the types of determinants that affecting the audit fees (Al-Harshani, 2008). One of the main issues of audit fees is to find out how auditors determine the amount of fees required from their clients (El-Gammal, 2012). In addition, there is also controversy occur due to different fees charges by auditors in different industry and the questions about the impact of corporate size, complexity and client risk on audit fees (Al-Matarneh, 2012).

Many recent studies have identified the variables such as profitability, status of audit firm, and corporate size that influencing audit fees were conducted by Mohammad Hassan and Naser (2013) in Abu Dhabi Stock Exchange, El-Gammal (2012) in Lebanon, Al-Matarneh (2012) in Jordan and Al-Harshani (2008) in Kuwait. Based on the number of researches that have been carried out in the past, there have been substantially proving that the types of determinants affecting the audit fees are still an issue that concerns many researchers.

There have not been many studies conducted to find out the audit pricing services in Malaysia and these studies do not test some determinants such as audit client risk. Moreover, the recent studies conducted by Koh and Tong in 2012 stated that audit client risk is positively related to audit fees. Apart from the studies undertaken by previous researchers, we found that there are limited studies conducted after the International Financial Reporting Standards (IFRS) convergence. Furthermore, there are lack of studies conducted by specifically focus on the manufacturing industry in Malaysia.

1.3 Research Objectives and Questions

The Table 1.1 has pointed out the research objectives and questions. It has included the general and specific research objectives and questions in order to identify the relationship of the key determinants associated with audit fees among listed manufacturing companies in Malaysia.

Table 1.1: Research Objectives and Research Questions

Research Objectives	**Research Questions**
General Objective This study is to investigate on the determinants of audit fees among listed manufacturing companies in Malaysia.	General Question What are the determinants affecting audit fees among listed manufacturing companies in Malaysia?
Specific Objectives i. This study is to investigate the relationship between *profitability* and audit fees among listed manufacturing companies in Malaysia. ii. This study is to investigate the relationship between *corporate size* and audit fees among listed manufacturing companies in Malaysia. iii. This study is to investigate the relationship between *complexity* and audit fees among listed manufacturing companies in Malaysia. iv. This study is to investigate the relationship between *status of audit*	Specific Questions i. Is there relationship between *profitability* and audit fees among listed manufacturing companies in Malaysia? ii. Is there relationship between *corporate size* and audit fees among listed manufacturing companies in Malaysia? iii. Is there relationship between *complexity* and audit fees among listed manufacturing companies in Malaysia? iv. Is there relationship between *status of audit firm* and audit fees among

firm and audit fees among listed manufacturing companies in Malaysia. v. This study is to investigate the relationship between *audit client risk* and audit fees among listed manufacturing companies in Malaysia.	listed manufacturing companies in Malaysia? v. Is there relationship between *audit client risk* and audit fees among listed manufacturing companies in Malaysia?

1.4 Significance of the Study

1.4.1 Practical Contribution

Knowledge about the determinants of audit fees can be useful for both audit firms and listed manufacturing companies in Malaysia. The determinants of audit fees related to the attributes of companies and audit firms provide knowledge to auditors and companies on the basis for audit pricing. By understanding the determinants of audit fees, companies can estimate the amount of audit fees that they are required to bear for the audit services in future so that managerial arrangements can be carried out to reduce the costs of audit. The knowledge of audit fees determinants can assist auditors in making audit pricing decisions and help auditors for pricing the audit services appropriately. This study enhances users or readers to obtain better understanding on the factors influencing audit fees among listed manufacturing companies in Malaysia currently.

1.4.2 Academic Contribution

This is an improved research model that used to determine factors that affect audit fees among listed manufacturing companies in Malaysia. This

study extends in Malaysia research based on the recent data extracting between year 2009 and year 2013. Besides that, this study will include a new independent variable which is audit client risk as this variable is considered still at infant stage in Malaysian studies. In fact, empirical evidence has proven that audit client risk is an important factor in determining auditor fees (El-Gammal, 2012; Stanley, 2011; Calderon, Wang, & Klenotic, 2012). Auditors are required to conduct more audit procedures with regards to risk associated with the client and this consequently resulting in a higher audit fee (Thinggaard & Kiertzner, 2008). Thus, it is believed that the audit fee charged is a cost to reflect the degree of audit client's risk assumed by the auditors. In addition, International Financial Reporting Standard (IFRS) will be categorized under complexity independent variable in this study.

1.5 Chapter Layout

The remaining chapters of this paper are organized accordingly. Chapter 2 describes theoretical framework of the study, literature review of prior empirical studies on determinants of audit fees, proposed empirical model and the hypothesis development tested in this study. Chapter 3 focuses on research methodology of the current study by using secondary data. This chapter comprises of the description of research design, defining the target population, identification of sample and sampling techniques, method of data collection, construction of measurements, data preparation processes and data analysis techniques. Chapter 4 analyses and interprets the results from data collected from a total sample of 169 listed manufacturing companies listed in Bursa Malaysia. Lastly, chapter 5 summarizes the final results findings and provides justifications for the discrepancies of hypotheses and final results. Recommendations and limitations will be highlighted and brought forward for further research.

1.6 Conclusion

In conclusion, concerns on audit fees determinants become increasingly significant in the recent years. This chapter serves as a brief outline of this research. It provides a foundation upon which enables readers to have a better understanding in the following chapters.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

Chapter 2 begins with an analysis of theoretical framework that will be used to support our research. Besides, in depth review of prior empirical studies on each variable will be carried out. Furthermore, proposed conceptual framework will be identified. Lastly, this chapter will ends with the hypotheses established for this study.

2.1 Theoretical Foundation

2.1.1 Agency theory

Agency theory has been extensively used in auditing areas (Ittonen, 2010). According to Jensen and Meckling (1976), an agency relationship can be defined as a contract in which one or more persons (principals) engage with another person (agent) to carry out the duty on their behalf by delegating some decision making authority to them. Agency problems are generally solved by agency costs when agents do not make decision in the best interest of principal with the goal of pursing their own interest. Agency theory was created by Stephen Ross and Barry Mitnick in the early 1970s (Mitnick, 2006). Some scholars who have involved themselves in this theory are Armen Alchian, Harold Demsets, Machael Jensen, and William Meckling (Mitnick, 2006).

Agency theory has been adopted in various research areas. For instance, agency theory has been applied in marketing and management research

(Tate, Ellram, Bals, Hartmann, & Valk, 2010), in finance research, (Demarzo, Fishman, He, & Wang, 2012) and in corporate governance research (Buchanan, Chai, & Deakin, 2014).

According to Eisenhardt (1989), agency theory is normally applied when resolving two issues that can be arisen in agency relationship. The first issue is when the goal of agent is not aligned with the goal of principal which results in conflicts of goals achievement and principal was unable to examine the appropriateness of agent's conduct. Another type of issue which arisen is the problem of risk issue. This can occur when principal and agent acted differently toward risk preference.

This difference purpose of their goals which between ownership and management will ultimately create information asymmetry and thus the agency costs (Farrer & Ramsay, 1998). This can also happen between auditors and shareholders. According to Institute of Charted Accountants of English and Wales (as cited in Soyemi & Olowookere, 2013), information asymmetries and vary of intentions can cause principals (shareholders) lack of trust on their agents (auditors) and thus it is important to make clear about the development of audit, its usefulness and objectives.

According to O'Sullivan's study (as cited in Mustapha & Ahmad, 2011), it is found that significant managerial ownership by merging the managerial and ownership can reduce the needs for extensive auditing which refer to the reduction of monitoring motivation for audit. It is indicated by O'Sullivan that auditor does not need to undertake additional testing due to the ownership of managers itself in the company and thus unlikely to involved in misleading. All of these will contribute to a reducing in audit fees.

According to Jensen and Meckling's study (as cited in Nikkinen & Sahlstrom, 2004), audit fees are one of the portions of monitoring cost. Auditors who act as an agent are responsible to assure that managers behave in line with owners' interest by carried out audit of the company's

accounts. If agency problem become complex, auditors need more time regarding inspection of accounts and managers' activities.

According to Jensen's study (as cited in Wang & Yang, 2011), agency problems tend to occur in the firms with lower growth rate and higher level of free cash flows because they are more likely to involve in unethical activities. Therefore, as audit risk increases, auditors have to perform more audit service. Empirical evidences have proven that there is a positive association between audit fees and management entrenchment.

According to Hope, Langli, and Thomas (2012), manipulation of earnings, fraud committing tends to occur when there is lacking of monitoring on manager's behavior which results in higher agency cost. Thus, shareholder monitoring is needed to minimize agency cost as shareholders increase the willingness to incur essential monitoring costs. The opposite is low monitoring cost incur when the ownership dispersed. This leads to the ideas that agency cost is low when ownership concentration increases. Higher ownership concentration with a higher protection of shareholders has a downward effect on the audit fee due to lower perceived audit risks. Therefore, there is less effort supplied by auditors and less demand for Big 4 auditor in which leads to lower audit fees when agency cost is lower.

2.2 Review of the Literature

The table 2.1 above illustrates the definition for audit fees, profitability, corporate size, complexity, status of audit firm and audit client risk.

Table 2.1: Definition of Dependent and Independent Variables

Dependent Variable	Definition
Audit Fees	• The level of fees (wages) charged in the audit service by the auditor based on service conducted, time spent, and the number of employee involved in the audit procedures (El-Gammal, 2012). • According to the International Standards on Auditing, audit fees defined as the amount that compensates the financial auditor's activities and qualifications of financial statements (Chersan, Robu, Carp, & Mironiuc, 2012).

Independent Variables	Definition
Profitability	• As cited in Brigham and Ehrhardt (2002), percentage ratios related to profit to other financial parameters such as revenue and total assets (Cui, 2005). • Profitability is used to evaluate the performance of the company (Moradi, Valipour, & Pahlavan, 2012). • Profitability acts as a benchmark in management performance and resource allocation (El-Gammal, 2012).
Corporate Size	• A structural property with the degree of formalization or a contextual variable in respect of the number of people, resources and the amount of

	activity involved in the organization (Javed & Khan, 2011). • As defined by Turley and Willekens (2005), corporate size is based on the total turnover and quantity of commonly owned assets of the firm (Susenso, 2013).
Complexity	• Generally, complexity is defined as a system which consists of many entities that have a high level of non-linear interactivity (Holmdahi, 2005). • Complexity increase with the IFRS adoption (Kim, Liu, & Zheng, 2012). • Auditors have to put more efforts and time in performing their audit after the adoption of International Financial Reporting Standards (IFRS) (Yaacob & Che-Ahmad, 2012).
Status of Audit Firm	• Large audit firms refer to Big Four international audit firms whereas small audit firms are referred to other firms (Mohammad Hassan & Naser, 2013). • Large audit firms are referred to Big Four where it comprises of KPMG, Deloitte, Ernst & Young and PricewaterhouseCoopers (Hallak & Silva, 2012).
Audit Client Risk	• Business risk is defined as those unforeseen changes to the legal circumstances to which insurers are subject to changes in the social and economic environment, as well as changes in business profile and business cycle (Buckham, Wahl, & Rose, 2010). • Entity's business risk also defined as the risk of the entity which would not continue to be profitable and survival (Ethridge, Marsh, & Revelt, 2007). • As defined by Lennox and Pittman (2010); Stanley (2011), business risk is measured by using the Return on Asset (ROA) as it represents business survival (Tahir & Paino, 2013).

2.2.1 Profitability

Mohammad Hassan and Naser (2013) investigated whether audit fees charged by nonfinancial companies would be influenced by company profitability. Data were collected through annual reports and governance reports from 30 Emirati nonfinancial companies which listed on Abu Dhabi Securities Exchange (ADX) during year 2011. Pearson correlation coefficient matrix was conducted in this study. The results showed that there is a positive insignificant association between the audit fees and the profitability.

El-Gammal (2012) determined the most vital factor that affected the level of audit fees as perceived by the different groups of respondents in Lebanon. Researcher distributed 150 questionnaires to leading banks, employees of three of the Big 4, and middle-sized CPA firms but only 80 of them were answered. Mann-Whitney U Test was used in this research and the importance of each factor in the determinant of audit fee had rated by using likert scale from 1-5. The results showed that profitability is insignificant to the determination of audit fees.

Moradi et al. (2012) examined the relationship between firm profitability and audit fees charged in different firms. Data were collected through the financial statement from 57 companies which listed on Tehran Stock Exchange from year 2003 to year 2009. Multi-variable regression analysis and one-way ANOVA analysis were conducted in this research. The results showed that profitability and audit fees are positively associated.

Al-Harshani (2008) investigated the determinants of audit fees in Kuwait. Data were obtained from six audit firms through survey in Kuwait which comprised of 49 audit engagements. Regression model has been used in this research. The results indicated that audit fees are positively related to firm's profitability.

Ebrahim (2010) conducted research on the effects of Sarbanes-Oxley (SOX) Act on audit fee premium in United States. Compustat annual files

were collected through Audit Analytics and Compustat databases from year 2000 to 2006. Audit fees change model regression has been used in this research. The results showed that audit fees are significantly and negatively related to firm's profitability. Details of the result are shown in Appendix A.

2.2.2 Corporate Size

A recent study of Wahab and Zain (2013) investigated firm size as the determinant of audit fees during initial engagement in Malaysia. Data were obtained from annual reports of 3,003 listed firms in Bursa Malaysia for the period from year 1996 to 2006. Panel regression analysis was employed in this study. The results showed that firm size and audit fees are significantly and positively related.

Another study conducted by Yaacob (2013) used corporate size as a control variable of determinant of audit fees to investigate the association between the adoption of FRS 139 and audit fees in Malaysia. Data extracted from the annual reports of 1,050 samples of non-financial companies listed on Bursa Malaysia in year 2006 to 2008. Generalized Least Squares (GLS) regression was conducted in the study. The results concluded that size is significantly and positively associated with audit fees.

Naser, Al-Mutairi, and Nuseibeh (2013) identified the association between audit fees and internal corporate governance effectiveness whereby firm size is used as a control variable of the study. Data were obtained from annual reports of 32 listed non-financial companies in Abu Dhabi Securities Exchange for the year 2012. Regression analysis was conducted in the study and the result showed that there is a significant and positive association between audit fees and corporate size.

Vermeer, Raghunandan, and Forgione (2009) proposed to provide empirical evidence about how firm size is associated with audit fees. 125

samples were selected from large non-profit organizations in United States. Data was obtained from each company's chief financial officer through questionnaire regarding audit and non-audit fees information as well as audit committees and internal auditing information in year 2001 and 2002. Regression analysis was conducted and the results showed that firm size is associated with audit fees.

Sori and Mohamad (2008) attempted to determine whether larger companies are expected to pay more external audit price than smaller companies. Data were collected through the annual reports of 100 companies listed on Bursa Malaysia from the stock market's directory in year 2007. Ordinary least square regression (OLS) was used in this study. The findings revealed that there is a positive and significant relationship between audit fees and corporate size. Details of the result are shown in Appendix A.

2.2.3 Complexity

A recent study was conducted by De Deorge, Ferguson and Spear (2013), to examine the relationship between IFRS adoption and audit fees in Australia. This study has focused on 907 companies and data has been collected from annual report published on Australian Stock Exchange (ASX) in the year 2002 to 2006. This study focused on cross-sectional variation analysis model and the findings showed that the amount of audit fees will be increased particularly for those firms with IFRS implementation during the year of adoption.

A Malaysian study of Yaacob and Che-Ahmad (2012) investigated the relationship between the complexity of new and amended IFRS and the audit fees in Malaysia. This study examined the annual report from 3,050 companies whereby 2,210 companies were listed on the main board and 840 companies were listed on second board in Bursa Malaysia from year 2004 to year 2008. Fixed effect regression model has been used in this

study and the result indicated that the audit fees are significantly increased after IFRS adoption.

Kim, Liu and Zheng (2012) analyzed the effect of IFRS adoption on audit fees in European Union countries on their study conducted in 2012. The samples comprised of 3,693 firms from 11 European Union countries and 11,903 firms from 3 non- European Union countries over the year 2004 to year 2008. This study using the pooled cross-sectional regressions of audit fees on their test variables. The result concluded that adoption of IFRS increase the audit fees.

Moreover, Redmayne and Laswad (2013) have studied the effect of IFRS adoption on public sector audit fees in New Zealand. This study has examined on 295 firms observations and the data are collected from New Zealand Office of the Auditor-General for the years 2001 to 2009. The results reported that the IFRS adoption was positively affect the audit fees and audit effort.

Griffin, Lont and Sun (2009) have examined the association between the governance regulatory forms and audit and non-audit fees in New Zealand. The study has collected financial data from 724 companies in the OSIRIS database between years 2002 to 2007. The study focused on pooled cross sectional regression models. The result revealed that audit fees were significant increased prior to IFRS adoption, the years of adoption, and after IFRS adoption. Details of the result are shown in Appendix A.

2.2.4 Status of Audit Firm

Recent research has been conducted by Siddiqui, Zaman, and Khan (2013) to investigate whether Big-Four affiliates earn audit fee premiums in Bangladesh. This study examined 122 listed companies in Dhaka Stock Exchange in year 2005. A correlation matrix for the regression models was used. The result revealed Big-Four affiliate firms are not positively related with audit fees.

Previous researchers such as Hallak and Silvar (2012) investigated the factors affecting auditing and consulting fees in Brazilian public companies. The research examined 219 companies publicly traded in 2009 and data were collected from Economatica, BM&FBovespa stock exchange, and Securities and Exchange Commission of Brazil. This study presented their data by using Systemic Generalized Methods of Moments (GMM) regressions model. The result indicated that audit fees are positively related with Big Four auditor.

Previous study carried out by Li and Zhu (2011) investigated the correlating factors of the audit fees in China whereby prestige of auditing firm was one of the determinants. This study focused on listed companies in Shanghai and Shenzhen Securities Markets and has obtained 1426 financial information from China Stock Market Accounting Research (CSMAR) during the year 2009. This study presented a correlation matrix for the regression models. The results showed the prestige of auditing firm is found to be significant associated with the audit fees.

El-Gammal (2012) has examined the factors that determining audit fees in Lebanon. Questionnaires were designed for data collection from a sample of 80 respondents including external auditors, and client representatives in year of 2012. This study presented a Mann-Whitney U test. Audit fees and status of audit fees are rated by respondents using a likert scale from 1 to 5. This research has revealed that the status of audit firm is significant to the audit fees determinants paid by multinational companies and banks. They are willing to pay higher audit fees because they seek higher quality audit work and the credibility of their annual reports.

Another study was conducted by Van Caneghem (2010) in Belgium to investigate audit pricing and the Big4 fee premium. Bureau van Dijk's Belfirst database was used for data collection which consists of Belgian and Luxemburg firms financial data. The sample comprised of 4,403 companies for year 2007. This study has employed an ordinary least squares (OLS) model. The result demonstrated that Big4 have a very

strong positive association with audit fees. Details of the result are shown in Appendix A.

2.2.5 Audit Client Risk

A recent study conducted by Koh and Tong (2012) investigated the impacts of clients' involvement in controversial corporate activities with audit pricing in United States. The data used in this research were represented by 20,687 firms which had been observed from year 2000 to 2010 as obtained from Audit Analytical database. The result concluded that the clients involved in controversial activities will be charged higher audit fees.

A study of Calderon, Wang, and Klenotic (2012) examined the association between incremental effect of internal control weaknesses and audit fees in United States. There were a total of 3,539 firm-year obtained in this research which focused on material weaknesses disclosed in the reports from Audit Analytics between year 2004 to year 2009. This study used the multivariate analysis and the result revealed that the relationship is positive related.

However, Stanley (2011) research showed that there is a significant negative relationship between audit fees and firms' business risk. The data were collected from New Generation Research Incorporation which identified 362 bankruptcy filings in year 2000 to year 2007. The multiple regression analysis was conducted in this study.

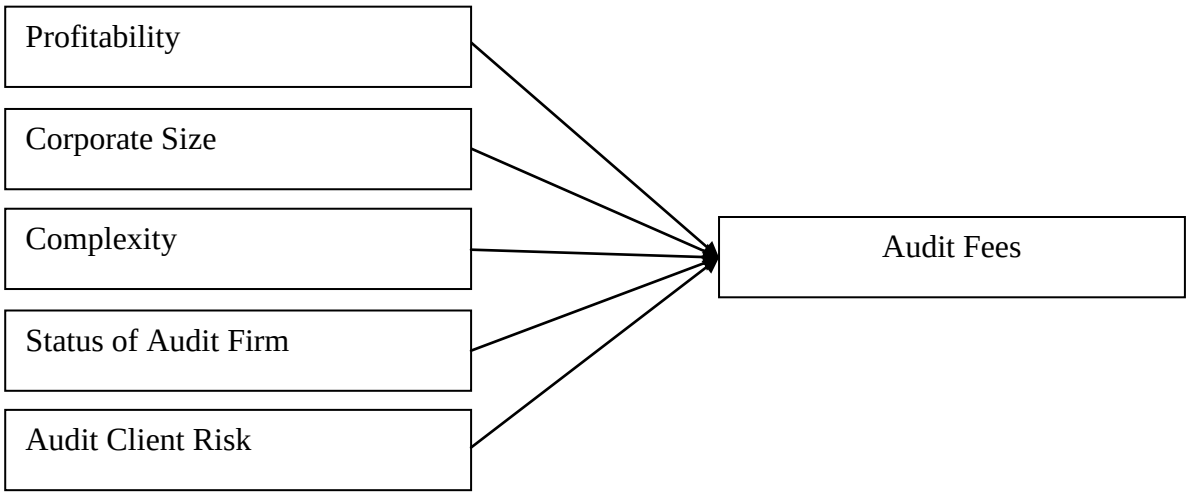
Tahir and Paino (2013) investigated the relationship between business client risks, fraud and audit fees in Malaysia. Data were obtained through annual report of 100 companies, comprised 10 fraudulent companies and 90 non-fraudulent companies which listed on Bursa Malaysia in 2012. Stepwise logistic regression analysis and fraud prediction model were used in this study. The result showed that firms which not involve in fraud and have low business risk are charged with high audit fees and vice versa.

Hogan and Wilkins (2008) identified reaction of auditors to the firms with high levels of control risk. Samples were collected from 6,735 observations which made up of 5,155 companies audited by Big Four firms while 1,580 companies audited by non Big Four firms from year 2002 to year 2004. Multivariate model were used in this study. The results indicated that the audit fees are positively related with internal control deficiency throughout the firms. Details of the result are shown in Appendix A.

2.3 Proposed Conceptual Framework

Figure 2.1 illustrated the relationship between the five types of determinants and their effects on the audit fees.

Figure 2.1: Theoretical research model investigating the five types of determinants that affecting the audit fees among listed manufacturing companies in Malaysia



Adapted from: Mohammad Hassan and Naser (2013) and Al-Harshani (2008)

2.4 Hypotheses Development

According to previous empirical studies on the determinants that influencing audit fees, the hypotheses were constructed as follow:

H_1: There is a significant relationship between profitability and audit fees among listed manufacturing companies in Malaysia.

H_2: There is a significant relationship between corporate size and audit fees among listed manufacturing companies in Malaysia.

H_3: There is a significant relationship between complexity and audit fees among listed manufacturing companies in Malaysia.

H_4: There is a significant relationship between status of audit firm and audit fees among listed manufacturing companies in Malaysia.

H_5: There is a significant relationship between audit client risk and audit fees among listed manufacturing companies in Malaysia.

2.5 Conclusion

In this chapter, the agency theory is adapted in our research. It includes the review of prior literature for each identified dependent and independent variables. After that, the proposed conceptual framework is developed followed by five hypotheses based on prior study. In the chapter 3, research methodology would be discussed thoroughly.

CHAPTER 3 : METHODOLOGY

3.0 Introduction

Chapter 3 discusses about the research design, data collection method and sample designs. Besides, secondary data collection method has been used in this research. Besides, secondary data has been chosen as our data collection method in this study. Next, data analysis techniques will be used to explain the variables and measurement in this research.

3.1 Research Design

This study aimed to examine the determinants of audit fees among listed manufacturing companies in Malaysia. Therefore, an explanatory research has conducted in this study to identify causal relationship (Gray, 2013) between variables. Quantitative methodology is used in this study because it allows summarize large amount of data quickly and consistently and thus results in greater accuracy (Fabozzi, Focardi & Ma, 2005). Thus, deductive approach is adopted in this study by using annual reports of 185 listed manufacturing companies in Bursa Malaysia which specified on industrial products from year 2009 to year 2013.

3.2 Data Collection Methods

Secondary data collection method has been used in this research. Data were collected from annual reports through 169 listed manufacturing companies in Bursa Malaysia from year 2009 to year 2013. According to Gladstone, Volpe and Boydell's study (as cited in Irwin, 2013) stated that secondary data can be used to

rise up the new issues or apply a new concept to the primary analysis. As mentioned in the research of Windle's study (as cited in Muller and Hart, 2011) which secondary data is useful to investigate the relationships of various variables in different research such as psychological versus sociological viewpoints. Lastly, it benefits researchers in terms of high quality of data source (Smith, 2011), less expensive (Zikmund, Babin, Carr & Griffin, 2012) and less time consuming compared to primary data collection as need to conduct and gather data specifically (Andersen, Prause & Silver, 2011).

3.3 Sampling Design

The target population for this research is the listed manufacturing companies in Malaysia. Manufacturing sector is selected for this study because this sector contributed significantly to the growth of Malaysia economy. During the Ninth Plan period, the manufacturing sector contributes largely to export, output growth, and employment creation in Malaysia (Ali, 2009). Ministry of International Trade and Industry (2014) reported that manufacturing sector has accounted the largest shares of foreign direct investment (FDI) inflows with a record of 37.60 % in year 2013 among the other sectors in Malaysia. This revealed that manufacturing sector plays an important role for the country's economic growth.

Census is one of the survey-based secondary data and will be used in this research. According to Abbott (2007), census is a study of every unit, everyone or everything in a population. Census able to provides a true measure of the population where maximize response rates and minimize non- response rates in a specific population. Besides that, detailed information about small sub-groups within the population will be available and improve user confidence with the result obtained.

The Main Market of Bursa Malaysia is chosen as the sampling frame in this research. This is because Bursa Malaysia is recognized as an approved exchange holding company in Malaysia in the effort to enhance the corporate governance of public listed companies (Ponnu, 2008). In accordance with the Bursa Malaysia

Listing Requirements and Securities Law, public listed companies are obligated to provide a quality disclosure of financial information in order to ensure their accountabilities towards the public. Hence, data will be extracted from published annual reports in Bursa Malaysia. Furthermore, according to the listing statistics obtained from Bursa Malaysia (2014), the Main Market of Bursa Malaysia comprises of the largest number of companies with 800 listed companies as compared to Ace Market which has only 109 listed companies.

Glick (2011) states that the more positive the correlation, the smaller the sample size is needed for the research; the more negative the correlation, the larger the sample size is needed for the research. This research only target on manufacturing companies listed in Bursa Malaysia. The sample size of this research is 185 companies, which is 100% of manufacturing companies listed in Bursa Malaysia which specified on industrial products from year 2009 to 2013 (Bursa Malaysia, 2014) . However, there are only remaining 169 listed manufacturing companies in this study after excluded 16 companies with insufficient data within the periods of 5 years. According to Croushore (2011), latest data can increase the reliability of data collection. Hence, this study is based on the latest data from Bursa Malaysia.

3.4 Constructs Measurement

The dependent variable, audit fees is measured by natural log of audit fees. Besides, the measurements of five independent variables are shown as follows:

1. Profitability is measured by ratio scale based on the ratio of net profits to sales (Mohammad Hassan & Naser, 2013).
2. Corporate size is measured by ratio scale based on the natural log of total assets (Al-Harshani, 2008).
3. Complexity is measured by nominal scale by using dummy variable. 1 for the post-IFRS period, and 0 for the pre-IFRS period (De Deorge, Ferguson & Spear, 2013).
4. Status of audit firm is measured by nominal scale using dummy variable. 1 if the status of audit firm is Big Four, 0 if otherwise (Hallak & Silva, 2012).

5. Audit client risk is measured by ratio scale based on the company return on assets ratio (Stanley, 2011). Details of the measurements are shown in Appendix B.

3.5 Data Analysis

3.5.1 Descriptive Test

According to El-Gammal (2012), descriptive analysis was conducted by using means, standard deviation and Mann-Whitney U test. Besides, according to Mohammad Hassan et al. (2013), descriptive analysis about continuous variables was conducted by using mean, median and standard deviation, whereas discontinuous variables were using frequency and percentage. Continuous variables in this study are audit fees, profitability, corporate size and audit client risk, where discontinuous variables are complexity and status of audit firm. Statistical Analysis System (SAS) computer software program will be used to interpret and summarize the data that we obtain from published annual reports.

3.5.2 Scale Measurements

The scale measurements consist of reliability test and normality test. According to Dabor and Adeyemi (2009), data collected from the published annual reports are credible, believable, and reliable. Thus, reliability test and normality test do not apply in this study.

3.5.3 Inferential Analysis

3.5.3.1 Pearson Correlation Coefficient

Pearson's correlation employed in our research because it is a number between -1 and +1 that measures the direction and degree of the relationship between two variables while dependent variable is audit fees and independent variables are profitability, corporate size, complexity, status of audit firm and audit client risk (Saunders, Lewis & Thornhill, 2012). A positive sign indicates a positive relationship whereas a negative sign signify the inverse relationship. The Coefficient Range is illustrated in Table 3.1.

Table 3.1: Coefficient Range

Coefficient Range	Strength
±0.91 to ±1.00	Very strong
±0.71 to ±0.90	High
±0.41 to ±0.70	Moderate
±0.21 to ±0.40	Small but definite relationship
±0.00 to ±0.20	Slight, almost negligible

Source: Hair, J. F. Jr., Money, A. H., Samouel, P. & Page, M. (2007*). Research methods for business Chichester*. West Sussex: John Wiley & Sons, Inc.

In our study, the multicollinearity problem existed when predictor variables are themselves highly correlated (correlation between IVs is more than 0.95) and make it difficult to identify separate effects of individual variables (Saunders et al., 2012). Several remedial actions are employed to solve the multicollinearity problem such as collecting additional data and model respecification (Paul, 2006).

3.5.3.2 Multiple Regression Analysis

Multiple regression analysis is conducted in this study to estimate the variation (Pal & Bhattacharya, 2013) in the audit fees accounted by the independent variables and also acts as a statistical tool to investigate the linear relationship between various variables. It is also useful in terms of predicting the effects of a set of predictors on audit fees within a time period (Tonidandel & LeBreton, 2011). The equation is described as below:

$$y = \beta_0 + \beta_1 \text{Profitability} + \beta_2 \text{Corporate Size} + \beta_3 \text{Complexity} + \beta_4 \text{Status of Audit Firm} + \beta_5 \text{Audit Client Risk} + \varepsilon$$

3.6 Conclusion

This chapter emphasizes the research methodology that is relevant in this study which comprises of research design, data collection methods, sampling design as well as scale measurement. This is followed by the techniques of data analysis which will be carried out to investigate linear relationships between each variable. A detailed data analysis will be presented in Chapter 4.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

Chapter 4 provides a research finding analysis based on data that has been collected. Statistical Analysis Software (SAS) is used to analyze the data and generate the results which used to examine the hypotheses that have been constructed in this study. Several analysis have been presented in this chapter which consist of descriptive analysis, measurement of scale and inferential analysis. A summary will be presented in the last part of the chapter.

4.1 Descriptive Analysis

4.1.1 Characteristics of Independent Variable

4.1.1.1 Complexity (AVE_CP)

Table 4.1: Complexity

AVE_CP	Frequency	Percentage (%)
0	34	20.12
1	135	79.88

Source: Developed for the research

Table 4.1 shows the results of the AVE_CP in the listed manufacturing companies in Bursa Malaysia. Based on table 4.1, 0 represents the

numbers of companies that do not apply IFRS, whereas 1 represents companies that do apply IFRS. From the total of 169 companies, there are 34 companies or 20.12% do not apply IFRS, whereas 79.88% which is out of 169 companies do apply IFRS.

4.1.1.2 Status of Audit Firm (AVE_SOAF)

Table 4.2: Status of Audit Firm

AVE_SOAF	Frequency	Percentage (%)
0	84	49.70
1	85	50.30

Source: Developed for the research

Table 4.2 describes the variable of AVE_SOAF used in this study. Based on table 4.2, 0 represents the numbers of companies which are not audited by Big 4, whereas 1 represents companies that are audited by Big 4. In other words, 84 or 49.70% are not audited in contrast with 85 or 50.30% out of 169 companies are audited by Big 4.

4.1.2 Characteristics of Dependent Variable

4.1.2.1 Audit Fees (DV_AF)

Table 4.3: Audit Fees

	N	Mean	Std. Deviation	Std. Error	Min.	Max.
Audit fees increase relative to the profitability	169	0.0434	2.0960	0.0221	-14.0936	9.4560
Audit fees increase relative to the corporate size	169	18.7205	1.2075	0.0378	14.1237	23.0864
Audit fees increase relative to the complexity	169	0.7988	0.4021	0.1038	0.0000	1.0000
Audit fees increase relative to the status of audit firm	169	0.5030	0.5015	0.0825	0.0000	1.0000
Audit fees increase relative to the audit client risk	169	0.0259	0.1518	0.3406	-1.1285	0.6197

Source: Developed for the research

The above results showed that corporate size has a great impact on the increase like of audit fees which has a mean score of 18.7205. From the results, other factors such as audit client risk can result in determining the amount of audit fees which has a mean score of 0.0259. Another factor is complexity with a mean of 0.7988, followed by status of audit firm which

has a mean of 0.5030. It can be concluded that audit client risk can be ranked as the least important factor in affecting the audit fees. The results above show that the hypothesis formed earlier can be accepted. It is clear that all factors have a relative importance on the determinant of audit fees.

4.1.3 Central Tendencies Measurement of Constructs

Table 4.4: Descriptive Statistics

Variable	Mean	Standard Deviation	Minimum	Maximum	N
AVE_PF	0.0434	2.0960	-14.0936	9.4560	169
AVE_CS	18.7205	1.2075	14.1237	23.0864	169
AVE_CP	0.7988	0.4021	0.0000	1.0000	169
AVE_SOAF	0.5030	0.5015	0.0000	1.0000	169
AVE_ACR	0.0259	0.1518	-1.1285	0.6197	169
DV_AF	10.5049	0.7544	8.0268	12.6324	169

Source: Developed for the research

The descriptive statistics on each variable used in this study is showed in Table 4.4. A total of 169 listed manufacturing companies in Malaysia was selected as the research samples. Based on the table 4.4, the mean value for AVE_PF is 0.0434 and a standard deviation of 2.0960. The minimum and maximum for AVE_PF are -14.0936 and 9.4560 respectively. Next, AVE_CS has a mean value of 18.7205 with a standard deviation of 1.2075. The minimum and maximum values are 14.1237 and 23.0864 respectively. Besides that, the mean value AVE_CP is 0.7988 with a standard deviation of 0.4021. For dummy variable, if there is IFRS between year 2009 and 2013 such situation will then be considered as 1, but 0 if there is no IFRS.

With regard to the AVE_SOAF, the mean is 0.5030 and the standard deviation is 0.5015. For dummy variable, 1 represents situation where firm is being audited by Big 4 between year 2009 year and 2013, but 0 if it is not audited by Big 4. Based on the table 4.4, AVE_ACR has a mean value of 0.0259 with a standard deviation of 0.1518.The minimum and maximum are -1.1285 and 0.6197 respectively. Lastly, the average of audit fees (DV_AF) is 10.5049 whereas the standard deviation is 0.7544. The minimum and maximum are 8.0268 and 12.6324 respectively.

4.2 Scale Measurement

4.2.1 Reliability Test

This research is based on secondary data collected from annual reports through the companies listed in Bursa Malaysia. The data extracted from published annual reports obtained from Bursa Malaysia from year 2009 to year 2013. Companies with insufficient data within the periods of 5 years will be excluded from this study. According to Saleh, Iskandar, and Rahmat (2005), the Securities Commission and Listing Requirements of Bursa Malaysia require all listed companies to prepare audited financial statements according to approved accounting standards in order to provide a better quality of information and more credible financial reporting. Che-Ahmad and Abidin (2009) states that big companies have reliable internal control, which in turn would reduce the propensity for financial statement error. Therefore, the data collected is assumed to be reliable. Hence, reliability test does not apply in this research.

4.2.2 Normality Test

Archila (2010) indicates that normality test is a special type of a hypothesis test. According to Abdi and Molin (2007), null hypothesis for normality test is that error is normally distributed whereas alternative hypothesis is that the error is not normally distributed. According to Che-Ahmad and Abidin (2009), substantial penalties imposed for nondisclosure or inaccurate financial disclosures will help to minimize the inaccuracy of the data. Data are extracted from annual reports through the companies listed in Bursa Malaysia. Therefore, normality test does not apply in this research.

4.3 Inferential Analysis

4.3.1 Pearson Correlation Analysis

Table 4.5: Correlations between Variables

	AVE_PF	AVE_CS	AVE_CP	AVE_SOAF	AVE_ACR	DV_AF
AVE_PF	1					
AVE_CS Sig. (2-tailed)	0.1909 0.0129	1				
AVE_CP Sig. (2-tailed)	0.1065 0.1682	0.1391 0.0713	1			
AVE_SOAF Sig. (2-tailed)	0.0166 0.8302	0.2415 0.0016	-0.0561 0.4690	1		
AVE_ACR Sig. (2-tailed)	0.5033 < 0.0001	0.4245 < 0.0001	0.2837 0.0002	0.0201 0.7952	1	
DV_AF Sig. (2-tailed)	0.2667 0.0005	0.6794 < 0.0001	0.2536 0.0009	0.2742 0.0003	0.4889 < 0.0001	1

Source: Developed for the research

Table 4.5 illustrates the correlation between the independent variables, profitability (PF), corporate size (CS), complexity (CP), status of audit firm, (SOAF), audit client risk (ACR) and dependent variable, audit fee (AF) for the 169 listed manufacturing companies listed in main market of Bursa Malaysia.

Correlations are statistically significant when the p-value is < 0.05. As showed in the table 4.5, the analysis results proved that AVE_PF ($r = 0.2667$, $p < 0.05$), AVE_CS ($r = 0.6794$, $p < 0.05$), AVE_CP ($r = 0.2536$, $p < 0.05$), AVE_SOAF ($r = 0.2742$, $p < 0.05$), AVE_ACR ($r = 0.4889$, $p < 0.05$) are all positively and significantly associated with AF.

In this study, the correlation between AVE_CS and AF is the strongest ($r = 0.6794$, $p < 0.05$) among all the correlations between IVs and DV. In contrast, the smallest correlation is between AVE_CP and AF ($r = 0.2536$, $p < 0.05$). There are 2 variables (AVE_CS, AVE_ACR) fall into moderate correlation with AF and 3 variables (AVE_PF, AVE_CP, AVE_SOAF) have small but definite relationship with AF. The correlation between each variable with itself in main diagonal is always 1, because they have a perfect positive correlation with itself. In general, correlation within ±0.21 to ±0.40 is considered as small but definite relationship correlation where correlation within ±0.41 to ±0.70 is considered as moderate correlation as cited by Hair et al., (2007).

Multicollinearity problem would exist when the correlation between IVs is more than 0.95 and it is due to a highly correlated between each IV (Saunders et al., 2012). The correlation between AVE_PF and all other IVs are ranging from 0.0166 to 0.5033. Furthermore, the correlation between AVE_CS and all other IVs are ranging from 0.1391 to 0.4245. The correlation between AVE_CP and all other IVs are ranging from -0.0561 to 0.2837 where the correlation between AVE_SOAF and all other IVs are ranging from -0.0561 to 0.2415. Lastly, the correlation between AVE_ACR and all other IVs are ranging from 0.0201 to 0.5033. Thus, there is no multicollinearity problem which exists in this study and the overall result generated will not be affected by the multicollinearity problem.

4.3.2 Multiple Regression Analysis

Table 4.6: Model Summary

Model Summary[b]

Root MSE	Dependent Mean	Coefficient Variable	R-Square	Adjusted R-Square
0.5168	10.5049	4.9196	0.5447	0.5307

a. Predictors: (Constant), Profitability, Corporate Size, Complexity, Status of Audit Firm, Audit Client risk.

b. Dependent Variable: Audit Fee

Source: Developed for the research

The results in Table 4.6 above indicate that the value of R-Square (R^2) at 0.5447 which means that 54.47% of variances in DV_AF (audit fees) can be predicted from the independent variables, AVE_PF (profitability), AVE_CS (corporate size), AVE_CP (complexity), AVE_SOAF (status of audit firm), AVE_ACR (audit client risk). The remaining 45.53% of variance in DV_AF (audit fees) would be explained by other factors which are not chosen in this study. R-Square is also referred to as the coefficient of determination.

The adjusted R^2 indicates a 53.07% in the variation of DV_AF (audit fees), which yields a more reliable value to predict the R^2 for the population. As the numbers of predictors variables are added to this model, each predictor variable will be able to improve the ability in explaining the variances in DV_AF (audit fees). Overall, this model is able to be used in predicting variation.

Table 4.7: Analysis of Variance

Analysis of Variance					
Source	**DF**	**Sum of Squares**	**Mean Square**	**F Value**	**Pr > F**
Model	5	52.0809	10.4162	39	< 0.0001
Error	163	43.5349	0.2671		
Corrected Total	168	95.6158			

c. Predictors: (Constant), Profitability, Corporate Size, Complexity, Status of Audit Firm, Audit Client risk.

d. Dependent Variable: Audit Fee

Source: Developed for the research

As reported in the table 4.7 above, the p-value of < 0.0001 is less than 0.05. The results suggest that the model is statically significant. The F Distributions and Significance Tables with 0.05 significance level reveal that the F value is 2.21 (Weiers, 2010) when v^1 (degree of freedom in the numerator) is 5 and v^2 (degree of freedom in the denominator) is 163.

As the F-test statistics generated (F = 39) is more than the critical value ($F_{0.05}$ = 2.21), it provides that conceptual model is a significant better model fit and thus the null hypothesis is rejected. In brief, a significant relationship is indicated between all the IVs (profitability, corporate size, complexity, status of audit firm, audit client risk) and DV (audit fees) used in this study.

Table 4.8 Parameter Estimates

Parameter Estimates							
Variable	Unstandardized Coefficients		Standardized Coefficients	T	Sig	Collinearity Statistics	
	B	Std. Error	B			Tolerance	VIF
1 Constant	3.9556	0.6975	0	5.67	<.0001	.	0
AVE_PF	0.0175	0.0221	0.0487	0.79	0.4280	0.7445	1.3432
AVE_CS	0.3324	0.0378	0.5320	8.80	<.0001	0.7636	1.3096
AVE_CP	0.2365	0.1038	0.1261	2.28	0.0240	0.9126	1.0957
AVE_SOAF	0.2226	0.0825	0.1480	2.70	0.0077	0.9284	1.0771
AVE_ACR	0.9935	0.3406	0.1999	2.92	0.0040	0.5948	1.6811

a. Dependent Variable: Audit Fee

Source: Developed for the research

4.3.2.1 Unstandardized Coefficients

Unstandardized regression coefficients (B) explained the changes in the dependent variable (audit fees) associated with 1 unit changes in independent variables, ceteris paribus. The following is the regression equation:

Y = 3.9556 + 0.0175 AVE_PF + 0.3324 AVE_CS + 0.2365 AVE_CP + 0.2226 AVE_SOAF + 0.9935 AVE_ACR

Based on the above linear equation, a significant relationship is found between DV_AF and AVE_CS, AVE_CP, AVE_SOAF and AVE_ACR, as the p-value for AVE_CS ($p < 0.0001$), AVE_CP ($p < 0.0240$), AVE_SOAF ($p < 0.0077$) and AVE_ACR ($p < 0.0040$) are less than 0.05. In contrast, AVE_PF with p-value = 0.4280 has no significant association with DV_AF because p-value is more than 0.05.

The equation provided that the DV_AF is predicted to be 3.9556 when there is no factor affecting it. The above linear equation showed that AVE_ACR is the most significant independent variable that influences DV_AF, which indicated that $\beta=0.9935$. It reported that DV_AF will be increased by 0.9935 in response to 1 unit change in AVE_ACR, ceteris paribus.

AVE_CS is the second significant independent variable in affecting DV_AF with $\beta=0.3324$. The third important independent variable is AVE_CP as $\beta=0.2365$ being showed, followed by AVE_SOAF with the value of $\beta=0.2226$, and lastly is the AVE_PF, which categorized as the fifth significant independent variable in which $\beta=0.0175$.

4.3.2.2 Standardized Coefficients

The Standardized Beta Coefficients was conducted to measure the contribution of each variable to the conceptual model. The higher the beta value of the IVs, the higher the significant changes in DV_AF. It is because high beta value will result in higher changes in DV_AF.

The results of Table 4.8 above shown that the standardized beta coefficients of all IVs are lower than 1. The independent variable which has the highest beta value is AVE_CS (0.5320), followed by AVE_ACR (0.1999), AVE_SOAF (0.1480), AVE_CP (0.1261), and lastly is the AVE_PF (0.0487).

4.3.2.3 Multicollinearity

According to Garson (2012), the multicollinearity problems exist when tolerance is less than 0.2 and variance-inflation factor (VIF) is higher than 4.0. From the results obtained in Table 4.8, the tolerance and VIF for AVE_PF, AVE_CS, AVE_CP, AVE_SAF, AVE_ACR were greater than 0.2 and lesser than 4.0, thus there is no multicollinearity problem.

4.4 Conclusion

In this chapter, SAS software has been used to interpret the data into charts and diagrams. As a result, there are only 4 independent variables that are accepted which are able to influence the audit fees. These independent variables include AVE_CS (corporate size), AVE_CP (complexity), AVE_SOAF (status of audit firm), and AVE_ACR (audit client risk). The relationship between independent variables has been conducted by using Pearson Correlation. Discussion will be presented in next section as well as conclusion of the whole study.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

Chapter 5 provides a summary of descriptive and inferential analyses, followed by a discussion of major research findings for the hypotheses testing, implications and limitations of the study as well as it provides an avenue for future research. A brief conclusion remark will be provided in the final section of this research.

5.1 Summary of Statistical Analysis

5.1.1 Descriptive Test

A total of 169 listed manufacturing companies in Malaysia were selected as the research samples. Table 4.4 provide a summary of the descriptive statistics of dependent variable (audit fee) and independent variables (profitability, corporate size, status of audit firm, complexity and audit client risk) from year 2009 to 2013.

The results of descriptive statistics show that audit fees in logarithms range from 8.0269 to 12.6324 with a mean of 10.5049. The profitability ratios measured by net profit to sales with a mean value of 0.0434. While for the corporate size, the minimum and maximum are 14.1237 and 23.0864 respectively, which has recorded the mean of 18.7205. Complexity and status of audit firm are measured by dummy variables, so it ranges from 0 to 1. The mean for both variables are 0.7988 and 0.5030 respectively. In

terms of audit client risk, it ranges between -1.1285 and 0.6197, with the mean of 0.0259.

5.1.2 Inferential Analysis

5.1.2.1 Pearson Correlation Coefficient

According to Saunders et al. (2012), Pearson Correlation will be employed in this research to measure the direction and degree of the relationship between two variables. As the results shown in the Table 4.5, AVE_CS has the highest correlation with DV_AF which is 0.6794 and AVE_CP has the lowest correlation with DV_AF which is 0.2535. The data generated show that the correlation for all IVs is less than 0.95 and thus there is no multicollinearity problem exists.

5.1.2.2 Multiple Regression Analysis

Based on the result obtained from the analysis, R^2 for the multiple regression model is 0.5447 which stated that there is 54.47% of variation in DV_AF can be explained by all independent variables. The remaining 45.53% is explained by other factors. The results also indicate that F-value (39) generated is highly significant as the P-value less than 0.0001. Besides, it also indicates that there is a significant relationship between dependent variable and independent variables. The equation derived from this study is Y = 3.9556 + 0.0175 AVE_PF + 0.3324 AVE_CS + 0.2365 AVE_CP + 0.2226 AVE_SOAF + 0.9935 AVE_ACR. The p-value of AVE_PF is 0.4280, which is more than 0.05, thus AVE_PF is supported to be statistically insignificant with DV_AF. There is no multicollinearity problem exists because all the values fall within the scope in the value of tolerance and variance-inflation factor (VIF).

5.2 Discussions of Major Findings

Table 5.1: Summary Result of Hypotheses Testing

Alternative Hypotheses	Hypotheses	Significant Level	Statistics Result
$H_0$1	There is no significant relationship between profitability and audit fees among listed manufacturing companies in Malaysia.	0.4280	Do not reject
$H_0$2	There is no significant relationship between corporate size and audit fees among listed manufacturing companies in Malaysia.	< 0.0001	Rejected
$H_0$3	There is no significant relationship between complexity and audit fees among listed manufacturing companies in Malaysia.	0.0240	Rejected
$H_0$4	There is no significant relationship between status of audit firm and audit fees among listed manufacturing companies in Malaysia.	0.0077	Rejected
$H_0$5	There is no significant relationship between audit client risk and audit fees among listed manufacturing companies in Malaysia.	0.0040	Rejected

Source: Developed for the research

There is no significant relationship between profitability and audit fees among listed manufacturing companies in Malaysia.

According to the finding from data analysis, AVE_PF was proved to have no significant relationship with audit fees. Null hypotheses (H0) of this variable is not rejected due to Multiple Linear Regression analysis generated the results of p-

value with 0.4280 which is more than 0.05. The finding from this study appears to be contradictory to the results of previous study carried out by Al-Harshani (2008) which reported that audit fees are positively and significantly associated with the profitability of the firm. Moradi et al. (2012) suggested that highly profitable audit client will be charged higher audit fees by audit firm as auditor is expected to collect more evidence to test an unusual high earnings as well as expenses of the company. The inconsistency of the findings with prior studies can be explained by the fact that the most of the previous researches did not adopt samples from manufacturing industry and the audit services market in Malaysia may be diverse as compared to those developed countries stock market.

However, the findings of the present study is identified to be supported by previous research conducted by Mohammad Hassan and Naser (2013) which concluded that profitability has no significantly relationship with audit fees. Swanson (2008) further claimed that the possibility of inappropriate in audit pricing decision could make if auditors are pricing the audit services related to the net profit of the company. The results are contradicted with the hypotheses developed where profitability is insignificant to the level of audit fees charged.

There is a significant relationship between corporate size and audit fees among listed manufacturing companies in Malaysia.

According to the finding from data analysis, AVE_CS was proved to have significant relationship with audit fees. Null hypotheses (H0) of this variable are rejected due to Multiple Linear Regression analysis generated the results of p-value with 0.0001 which is less than 0.05.

These findings of the study consistent with the results of previous studies conducted by Yaacob (2013) and Naser et al. (2013) which revealed that corporate size and audit fees were significantly associated. Wahab and Zain (2013) stated that larger corporate size demand more time to design audit procedures and to conduct more test of detail due to the scope and complexity of an audit which consequently result in a higher audit fees charged by the auditors. The results are in line with the hypotheses developed where corporate size is significant to the level of audit fees charged.

There is a significant relationship between complexity and audit fees among listed manufacturing companies in Malaysia.

Based on the finding from data analysis, AVE_CP was found to have a strong impact on dependent variable, audit fees. Null hypotheses (H0) of this variable are rejected due to Multiple Linear Regression analysis generated the results of p-value with 0.0240 which is less than 0.05.

The results found is in line with most of the prior studies which has tested on the impact of complexity on audit fees. Most empirical studies of De Deorge et al. (2012), Yaacob and Che-Ahmad (2012) and Kim et al. (2012) found out that complexity has a significant and postive impact on audit fees. The complexity of the new IFRS drive increases the disclosure, and thus, it demands higher auditor effort and time in verifying and providing assurance on the audited financial statements.

Besides that, new IFRS reporting requirements which include financial instruments disclosure such as hedge accounting, other intangible assets, and goodwill impairment require greater auditor effort and expertise. Thus, firms whose were exposed to new IFRS incurs greater increase in the audit fees. Hence, there is a significant increase in audit fees after adoption of the new IFRS. The results are in line with the hypotheses developed where audit fees increase with the complexity of new and amended IFRS.

There is a significant relationship between status of audit firms and audit fees among listed manufacturing companies in Malaysia.

Based on the finding from data analysis, AVE_SOAF was found to have a strong impact on dependent variable, audit fees. Null hypotheses (H0) of this variable are rejected due to Multiple Linear Regression analysis generated the results of p-value with 0.0077 which is less than 0.05.

Thus, contrary to Siddiqui et al. (2013) which stated that status of audit firms did not affect audit fees, the results developed provided the evidence that those audit

clients not purchasing non-audit services will be charged higher audit fees and not related to the status of audit firm.

The findings of this study consistent with the prior studies which found out a significant relationship between status of audit firm and audit fees. As revealed by Hallak and Silva (2012) and Li and Zhu (2011), Big Four auditors charges higher audit fees because their legal liability costs are greater so they exert more effort. Big Four auditors reputation will be affected if the quality of audit work are affected. Therefore, the greater the reputation of an audit firm, the higher the audit fees being charged. Hence, the status of audit firm results in higher audit fees. Thus, the results found is in line with most of the prior studies which has tested on the impact of status of audit firm on audit fees.

There is a significant relationship between audit client risk and audit fees among listed manufacturing companies in Malaysia.

Based on the finding from data analysis, AVE_SCR was proved to have a strong impact on dependent variable, audit fees. Null hypotheses (H0) of this variable are rejected due to Multiple Linear Regression analysis generated the results of p-value with 0.0040 which is less than 0.05.

This results were consistent with past studies of Koh and Tong (2012), Calderon et al. (2012) and Stanley (2011) which provided that audit client risk has positive relationship with audit fees. Past control risk, changes in client economic conditions and involvement in controversial corporate activities have effect on audit fees. Hence, the audit client risk results in auditor increasing audit fees. The results are in line with the hypotheses developed where audit fees increase with the audit client risk.

5.3 Implications of the Study

5.3.1 Managerial Implications

This research examines the relationship between profitability, corporate size, complexity, status of audit firm audit client risk which affects the amount of audit fees among listed manufacturing firms in Malaysia. The findings presented in the study indicated that the independent variables (corporate size, complexity, status of audit firms and audit client risk) have a significant relationship to the dependent variable (audit fees). Based on the results of the study, practitioners such as manufacturing companies, audit firms as well as regulatory bodies are able to obtain several implications.

Manufacturing companies will be advised to focus on the determinant factors that are deemed to have significant associated with audit fees. By understanding how these independent variables affect audit fees among manufacturing firms, companies can gain more insights on what they are paying for and whether the audit fees are priced at an acceptable level. Moreover, the findings of this study provide a better understand on how corporate structure and strategic decisions could affect audit fees as it will influence the auditors to adequately evaluate the audit risk associated with that audit engagement when making audit pricing decision. For instance, large companies are more likely to have greater transactions and balances and require more audit services than smaller companies and thus resulting in higher level of audit fees charged. In addition, a company's decision to reduce the agency cost and increase the value of the firm may choose to appoint Big 4 auditors. This in turn, results in a higher audit fees charged by auditors as a reflection of brand name reputation and higher audit quality provided by the audit firms.

Based on the findings of the study, companies should also consider that the complexity of IFRS has a significant relationship with audit fees charged due to more audit works are required to verify and resolve any uncertainties to ensure that management accounting judgments are reasonable. This is essential especially when some accounting treatments are new to both companies and auditors.

Moreover, audit client risk is found to be significant associated with audit fees. Audit client risk is an indicator of material misstatements due to higher potential of company-wide internal control weaknesses. Thus, the audit procedure planned is expected to incorporate various risk factors in order to minimize auditor's risk. These audit efforts are assumed to reflect on the level of audit fees which consequently leads to stakeholders who perceive that the higher audit fee charged by the auditor the riskier the client. Therefore, companies should be advised to concern with the level of risk by strengthening the internal control of the company in order to reduce the audit risk perceived by the auditors.

On the other hand, the findings of this research may provide a basis for audit firms to regulate or establish policies relating to audit pricing in Malaysia. This paper contributes to audit firms by helping auditors to make audit pricing decision and provide an in-depth analysis of audit fees determinants in Malaysia manufacturing firms. From the regulatory bodies' perspectives, Malaysian Institute in Accountants (MIA) can use this research to regulate the practice of charging a reasonable level of auditor remuneration, commensurate with the provision of professional assurance services of an acceptable and recognized standard in Malaysia. Thereby, it encourages professional auditors in public practice to comply with the rules and standards in the performance of and charging for their respective duties.

5.3.2 Theoretical Implications

This research provides further implications for researchers by introducing the improved research model. It has extended research of determinants of audit fees in Malaysia by incorporating new variable which is audit client risk and a significant relationship between audit client risk and audit fees has been shown in the findings of this study. This study serves as the basis for future researches with a better understanding of audit market in Malaysia.

5.4 Limitations of the Study

Several limitations existed in this study may provide opportunities for future research. First of all, the unit of analysis for this research is based on listed manufacturing companies in Malaysia which is particularly specific on industrial product. According to Ali, Sahdan, Rasit, and Lee (2008), research which focused only on listed firms may not be able to provide findings that are generalizeable to the entire audit market in Malaysia. Hence, current data collection may limit the generalizability of the research finding. Therefore, the findings of this research may not be suitable to unlisted firms.

Next, this research findings are limited by five measurement tools which are used to define the independent variables (net income to sales, natural log of total assets, nominal data and return on assets). There are still a number of measurement tools available which can be used to define the independent variables. Using other measurement tools of independent variable may be more suitable and appropriate to apply in this research.

Moreover, the research is only focused on five factors as independent variables which may affect the determinants of audit fees in Malaysia. However, this research does not include other factors which have been emphasized by other researches. Therefore, factors such as corporate governance may not be able to explain in this research.

Lastly, the data collection of the research study is based on quantitative methodology only. Although quantitative methodology provides results which are more reliable and consistent, but it does not provide a holistic picture of the research findings as compared to the qualitative methodology.

5.5 Recommendations for Future Research

Firstly, future research can be conducted by focusing on the determination of audit fees in other capital market and/ or in unlisted companies in order to determine whether the difference between two research models justifies and provides a wider aspect of research study.

Future researchers are advised to undertake analysis of other measurement tools for independent variables and identify those which have significant relationship with audit fees. This is done in order to examine the effects of using different measurement tools of independent variables.

In addition, future researchers are recommended to incorporate additional independent variables that have been suggested by prior studies which can enhance and extend the research model that is currently adopted in this study. Other independent variables are encouraged to be incorporated because it might also contribute to the determination of audit fees in Malaysia.

The data collection approach in the current research study could be extended by other research methodology. Future researchers are suggested to adopt other research methodologies such as questionnaires, survey, and case study in order to provide better insights of audit market and understanding about the determinants of audit fees.

5.6 Conclusion

The study is aimed to investigate the determinants of audit fees among listed manufacturing companies in Malaysia. According to the multiple linear regression analysis, the results showed that for Malaysian listed manufacturing companies, there are four factors having explanatory power on audit fees, namely corporate size, complexity, status of audit firm and audit client risk. Meanwhile, the findings of the present study showed that profitability is not a significant factor affecting the audit fees. Manufacturing companies should concern on the significant factors of audit fees. Last but not least, several limitations have been identified in this research so that future researchers could avoid these limitations and make improvements to the research studies in this area. Besides that, there are several recommendations which have been presented in this study in order to overcome the limitations of the study which may help future researchers conduct their studies with better improved results.

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Appendix A: Summary of Past Empirical Studies

Study	**Country**	**Measurement and Data Collection**	**Major Findings**
Mohammad Hassan and Naser (2013)	Abu Dhabi	-Pearson correlation coefficient matrix -Audit fees were measured by logarithms whereas profitability was measured by using net income to sales -Annual reports and governance reports from 30 Emirati nonfinancial companies which listed on Abu Dhabi Securities Exchange (ADX) during year 2011	The results showed that there is a positive insignificant association between the audit fees and the profitability.
El-Gammal (2012)	Lebanon	-Mann-Whitney U Test -The importance of each factor in the determinant of audit fees is rated by using likert scale from 1 to 5 -150 questionnaires to leading banks, employees of three of the Big 4, and middle-sized CPA firms but only 80 of them were answered	The results showed that profitability is insignificant to the determination of audit fees.
Moradi, Valipour and Pahlavan (2012)	Tehran	-Multi-variable regression analysis and one-way ANOVA analysis -Audit fees were measured by logarithm whereas profitability was measured by return on assets -Financial statement from 57	The results showed that there is a positive relationship between company profitability and audit fees.

		companies which listed on Tehran Stock Exchange from year 2003 to year 2009	
Al-Harshani (2008)	Kuwait	-Regression model -Audit fees were measured by logarithm whereas profitability was measured by return on investment which ratio of the client's net income to total stockholders' equity. -Survey through 49 audit engagements with 2005 fiscal-year ends that were performed by both "Big" and "non-Big" audit firms	The results showed that audit fees are positively related to the profitability of the audit client.
Ebrahim (2010)	United States	-Audit fee change model regression -Audit fees were measured by logarithm whereas profitability was measured by return on assets where income before tax divided by total assets -Compustat annual files were collected through Audit Analytics and Compustat databases from the year 2000 to year 2006	The results showed that audit fees are significantly and negatively related to client's profitability.
Wahab and Zain (2013)	Malaysia	-Panel regression analysis -Audit fees is measured by natural log of audit fees whereas firm size is measured by the natural log of total assets -Annual reports of 3,003 firms	The study found that there is a significant and positive relationship between firm size and audit fees.

		listed on Bursa Malaysia from year 1996 to year 2006	
Yaacob (2013)	Malaysia	-Generalized Least Squares (GLS) regression -Audit fees is measured by natural log of the external audit fee, and corporate size is measured by natural log of total assets -Annual reports of 1,050 samples of non-financial companies listed on Bursa Malaysia in year 2006 to year 2008	The results concluded that size and audit fees are significantly and positively associated.
Naser, Kandari, Al-Mutairi, and Nuseibeh (2013)	United Arab Emirates	-Regression analysis -Audit fee is measured by natural logarithm of audit fees whereas corporate size is measured by natural logarithm of total assets -Annual reports of 32 non-financial companies listed on Abu Dhabi Securities Exchange (ADX) in year 2012	The result showed that there is a significant and positive association between audit fees and corporate size.
Vermeer, Raghunandan, and Forgione (2009)	United States	-Regression analysis -Audit fee is measured by natural log of external audit fees and corporate size is measured by natural log of total assets -125 company's chief financial officer through questionnaire in year 2001 and year 2002	The results concluded that firm size is associated with audit fees.
Sori and	Malaysia	-Ordinary least square	The results revealed that

Mohamad (2008)		regression (OLS) -Audit fee is measured by natural log of external audit fees and corporate size is measured by market capitalization. -Annual reports of 100 companies listed on Bursa Malaysia from the stock market's directory in year 2007	there is a positive and significant relationship between audit fees and corporate size.
De Deorge, Ferguson and Spear (2012)	Australia	-Cross-sectional Variation Analysis Model -Audit fees are measured by natural log of audit fees paid to external auditors and the complexity is measured by a dummy variable which is set 1 in the year of IFRS adoption, and assigned a value of 0 otherwise. -Annual reports from 907 companies published on Australian Stock Exchange (ASX) in the year 2002 to year 2006	The findings showed that the amount of audit fees will be increased particularly for those firms with IFRS implementation during the year of adoption.
Yaacob and Che-Ahmad (2012)	Malaysia	-Fixed Effect Regression Model -Audit fee is measured by the natural log of audit fee whereas the complexity is measured by Post-IFRS adoption period (code 1 for data after IFRS adoption, 0 before IFRS adoption). -Annual reports from 3,050	The result indicated that the audit fees are significantly increased after the adoption of IFRS.

		companies in Bursa Malaysia from year 2004 to year 2008	
Kim, Liu and Zheng (2012)	European Union countries	-Pooled Cross-sectional Regressions Model -The audit fee is measured by natural log of audit fee and complexity is measured by dummy variables where 1 for the post-IFRS period, and 0 for the pre-IFRS period. -Observation of 15,596 firms from eleven European Union countries and three non-European Union countries over the year 2004 to year 2008	The result concluded that adoption of IFRS increase the audit fees.
Redmayne and Laswad (2013)	New Zealand	-No model is supported as the comparison method is used -The audit fee is measured by the amount of audit fee and complexity is measured by IFRS pre-adoption year and the first year of IFRS adoption -Observations on 295 firms in New Zealand from year 2001 to year 2009	The results reported that the IFRS adoption was positively affect the audit fees and audit effort.
Griffin, Lont and Sun (2009)	New Zealand	-Pooled cross sectional regression models -The audit fee is measured by natural log of audit fee and complexity is measured by dummy variables where 1 for the post-IFRS period, and 0 for the pre-IFRS period.	The result revealed that audit fees were significant increased prior to IFRS adoption, the years of adoption, and after IFRS adoption.

		-Financial data from 724 companies in the OSIRIS database between year 2002 to year 2007	
Siddiqui, Zaman, and Khan (2013)	Bangladesh	-Correlation matrix for the regression models -Log of audit fees has been used to measure audit fees, and a dummy variable where one represents a Big-Four affiliate is used to measure Big-Four affiliate -122 companies listed on Dhaka Stock Exchange in year 2005	The result revealed Big-Four affiliate firms are not positively related with audit fees.
Hallak and Silvar (2012)	Brazil	-Systemic Generalized Method of Moments (GMM) Regressions Model -Fees are measured by logarithm of total expenditure on auditing and consulting services whereby Big4 status is measured by using a dummy variable in which one represents the Big Four auditor. -219 companies publicly traded in year 2009 and data collected from Economatica, BM&FBovespa stock exchange, Securities and Exchange Commission of Brazil	The result indicated that audit fees are positively related with the Big Four of auditor.
Li and Zhu (2011)	China	-Correlation matrix for the regression models -Audit fees is measured by	The results showed the prestige of auditing firm is found to be significant

		natural log of audit fees whereby Big 4 auditors measured by using dummy variable in which one stand for firm with Big 4 auditors -1426 listed companies' financial information from China Stock Market Accounting Research (CSMAR) during the year 2009	associated with the audit fees.
El-Gammal (2012)	Lebanon	-Mann-Whitney U Test -Audit fees and status of audit fees are rated by respondents using a likert scale from 1 to 5 -150 questionnaires were designed to collect data from a sample of 80 respondents	This research has revealed that the status of audit firm employed by the company is significant to the determinants of audit fees.
Van Caneghem (2010)	Belgium	-Ordinary least squares (OLS) model -Natural log of audit fees has been used to measure audit fees, and a dummy variable where one represents a Big4 auditor is used to measure Big4 auditor -Data of 4,403 companies were extracted from Bureau van Dijk's Belfirst database which consists of Belgian and Luxemburg firms financial data	The result demonstrated that Big4 have a very strong positive association with audit fees.
Koh and Tong (2012)	United States	-Correlation Matrix for Regression Model -The audit fee is measured by	The result concluded that the clients involved in controversial activities

		natural log of audit fee and risk is measured by return on asset -20,687 firms observations in year 2000 to year 2010 from Audit Analytical database	will be charged higher audit fees.
Calderon, Wang and Klenotic (2012)	United States	-Multivariate Analysis Model -The audit fees is measured by natural log of audit fees and the risk is measured by return on asset. -3,539 firms which focus on public disclosures of material weaknesses in the reports compiled by Audit Analytics from year 2004 to year 2009	The study indicated that the relationship is positively related.
Stanley (2011)	United States	-Multiple Regression Analysis Model -The audit fee is measured by natural log while the business risk is measured by return on asset. -362 bankruptcy filings in year 2000 to year 2007 from New Generation Research Incorporation	The result was significant negative relationship between audit fees and the client firms' business risk.
Tahir and Paino (2013)	Malaysia	-Stepwise logistic regression analysis and fraud prediction model -The audit fee is measured by using audit fee dividing total assets while the business risk is measured by return on asset - Annual report of 100	The result showed that firms which not involve in fraud and have low business risk are charged with high audit fees and vice versa.

		companies listed on Bursa Malaysia in year 2012	
Hogan and Wilkins (2008)	United States	-Multivariate model -The audit fees is measured by calculating a percentage of total client assets whereby internal control is measured by using dummy variable in which 1equal to if the internal control problem disclosure indicates a material weakness and 0 otherwise -6,735 observations which made up of 5,155 companies audited by Big Four firms and 1,580 companies audited by non Big Four firms from year 2002 to year 2004	The results indicated that the audit fees are positively related with internal control deficiency throughout the firms.

Appendix B: Operation of the Model Variables

Variable	Item	Description	References	Measurement
Audit fees	DV1	Natural log of audit fees	Siddiqui, Zaman & Khan, 2013	Ratio scale
Profitability	IV1	Net profits to sales	Mohammad Hassan & Naser, 2013	Ratio scale
Corporate Size	IV2	Natural log of total asset	Al-Harshani, 2008	Ratio scale
Complexity	IV3	International Financial Reporting Standards (IFRS) adoption	De Deorge, Ferguson & Spear, 2013	Nominal scale. 1 for the post-IFRS period, and 0 for the pre-IFRS period.
Status of Audit Firm	IV4	Large audit firms are referred to Big Four where it comprises of KPMG, Deloitte, Ernst & Young and PricewaterhouseCoopers.	Hallak & Silva, 2012	Nominal scale. 1 if the status of audit firm is Big Four, 0 if otherwise.
Audit Client Risk	IV5	Return on assets	Stanley, 2011	Ratio scale