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THE IMPACT OF GOVERNANCE CHARACTERISTICS AND NON-AUDIT FEES ON AUDIT PRICING: EVIDENCE FROM UK LISTED COMPANIES

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ABSTRACT

Due to concerns regarding auditor independence and the importance of good corporate governance for business, especially in the wake of corporate scandals and collapses, the relationship between auditor and corporate governance has become more important. Therefore, this study examines the impact of governance characteristics and non-audit fees on audit quality proxied by the audit fees in the UK before and after the recent economic crisis. It utilises the data from a sample of 384 FTSE All Share listed companies in 2007 and 2010.

This study provides evidence that before the economic crisis audit committee diligence, audit committee commitment, management share ownership and non-executive share ownership had a significant impact on audit fees. In the post-economic crisis, none of the audit committee characteristics exhibits a significant relationship with audit fees, while non-executive director shareholding and management shareholding remain significant. The increasing levels of compliance with Codes of Corporate Governance and listing requirements, especially since the economic crisis, may be the reason why governance characteristics have lost their explanatory power. The finding also indicates a positive relationship between audit and non-audit services pre and post economic crisis. Detailed analysis shows that non-audit services supplied pursuant to legislation, taxation and other non-audit services have a significant positive relationship with audit fees. Therefore, it provides evidence to reject the notion of a total prohibition of non-audit services, as the provision of non-audit services does not seem to affect auditor independence.

Being comprehensive in its scope and methods employed to measure these characteristics, this study offers a major contribution to the understanding of the association between various governance characteristics and financial reporting quality in two economic environments; before and after economic crisis. Another major contribution is that this study is the first to utilise published data in investigating the impact of individual components of non-audit services on audit pricing as this published information only became available in 2006.

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CHAPTER 1: INTRODUCTION

1.1 Audit Pricing and Corporate Governance

In the wake of numerous corporate scandals and collapses (e.g. Enron, WorldCom and Lehman Brothers in the US and Northern Rock and the Royal Bank of Scotland in the UK), interest in the quality of corporate governance has increased dramatically. As part of this concern the attention of corporate stakeholders has increasingly focused on the quality of financial disclosures, a key component of which is the statutory audit and, consequently, audit pricing. A survey involving 40 Fortune 500 companies indicated that in 2004, the audit fees charged by the big four accounting firms had increased significantly and that much of this increase in fees was attributed to the additional work mandated by the Sarbanes-Oxley Act (Taub, 2005). Another study by Griffin and Lont (2007) also documents a significant positive relationship between residual audit fees following the introduction of the SOX and proxies for incremental audit risk and audit effort. In New Zealand, new regulation, effective from 1st July 2012, requires individual audit partners to be licensed and audit firms to be registered. According to Hay (2012), this requirement will increase average audit fees as bad auditors who are not qualified will drop out of the system and audit quality will rise as part of the same process. As a result of such regulation auditing firms are increasingly under pressure to deliver a high standard of auditing, while also doing so in the most efficient and effective way.

Companies, on the other hand, could minimise the cost of auditing by enhancing their internal control systems. Traditional arguments have suggested that an effective and reliable internal control system could go some way to reducing the amount of testing and investigation needed by auditors and therefore could reduce the costs of auditing (Collier and Gregory, 1996). However, higher standards of internal governance could also mean a higher degree of commitment towards the welfare of shareholders and this could lead to the purchase of higher quality audit services since a higher quality audit means a higher level of verification of accounting records and assurance of transparency

(O'Sullivan, 2000). The possibility that higher standards of internal governance may actually have either a positive or negative impact on audit fees raises an important empirical question deserving of research attention. In other words, how do companies' governance characteristics influence the pricing of audit contracts?

There are a number of components of internal governance that could constitute good internal control in a company. The composition of the board of directors has long been viewed as a key organ of governance in shareholder-owned companies. More specifically, governance regulators consistently assert that appropriately led and independent boards are a pre-requisite for good governance (Cadbury, 1992; Combined Code, 1999; 2003; 2006; 2008; UK Corporate Governance Code, 2010). More recently, regulators have focused on the existence and specific characteristics of audit committees in seeking to enhance the quality of the external audit process. In particular, current governance regulation, both in the UK and in the US, stresses the importance of independent, effective and diligent audit committees for enhancing the quality and transparency of corporate financial disclosure (e.g. The Combined Code (2006), Smith Guidance (2003), Turnbull Guidance (2005) in the UK and Sarbanes Oxley Act (2002) in the US) In addition to board and audit committee characteristics, the nature of a company's ownership structure may influence the extent of the audit undertaken and, consequently, the fee charged. In particular, companies whose managers possess significant ownership stakes may not have so much need for extensive audits while companies with significant external blockholder ownership may also require a less extensive audit since large blockholders are more likely to be able to more directly monitor managerial behaviour (Chan et al., 1993; O'Sullivan, 2000; O'Sullivan and Diacon, 2002; Mitra et al., 2007). The statutory audit is a monitoring mechanism available to shareholders in addition to the internal governance mechanisms mentioned above. An understanding of the relationship between internal governance characteristics and the statutory audit is valuable since these two mechanisms can complement each other in achieving better corporate governance. The objective of this thesis is to achieve such an understanding.

1.2 Motivation for the Study

Following the increase in concern regarding corporate governance and the contribution of external auditors to ensuring the transparency of financial statements, understanding the relationship between relevant governance characteristics and audit quality, typically proxied by audit fees, is becoming more relevant. However, there are not many studies done in the UK investigating the relationship between governance characteristics and audit pricing. Most of the previous UK studies use data from the 1990s, especially around the release of the Cadbury Report in 1992. For example, O'Sullivan (1999) investigates the impact of board and audit committee characteristics on audit pricing, using data from 146 large UK listed companies at the end of the 1995 financial year. This study, therefore, utilises data from the post-Cadbury period. The Cadbury report outlined a number of recommendations around the separation of the role of chief executive and chairman in an organisation, greater use of non-executive directors, clearer selection processes for non-executive directors, greater transparency of financial reporting, and the need for improved internal controls. O'Sullivan (1999) found no evidence that board and audit committee characteristics influence auditors' pricing decisions. The author suggests that any fee reductions expected due to improved board monitoring may be counterbalanced by the increase in audit effort and assurances desired by non-executive directors. In a subsequent study, O'Sullivan (2000) investigates the impact of board and ownership structure on audit fees in the pre-Cadbury period, utilising data from 402 quoted companies in 1992. In contrast to the result of his post-Cadbury study, it is found that the proportion of non-executive directors has a significant positive impact on audit fees while audit fees are negatively related to the proportion of equity owned by executive directors. However, the results of another pre-Cadbury study of the impact of board composition variables on audit pricing, by Peel and Clatworthy (2001), shows that a range of board composition variables were insignificantly related to audit fees.

In response to the controversial failure of Enron in 2002 in the US, UK regulators established the Smith Committee in 2003. There have been significant changes to UK corporate governance following the recommendations of the

Smith Report (2003), especially with regard to recommendations concerning audit committee effectiveness. The recommendations include: all audit committee members should be independent directors, at least one of whom should have recent and relevant financial experience; the audit committee should have primary responsibility for all aspects of the company's relationship with the external auditors; the committee should make an annual report to shareholders, to include an explanation as to how the auditor's objectivity and independence is maintained in cases where the auditor is also employed to provide non-audit services to the company. In addition, the report (Smith Report, 2003) also recommended that audit committees should have at least three members (two in the case of smaller companies); members should not serve for more than two three-year terms; and there should be a minimum of three meetings per year. Subsequent revisions of the Combined Code in 2006 and 2008 as well as the *UK Corporate Governance Code* in 2010 and 2012 have basically carried forward the existing recommendations for audit committees as recommended by the Smith Report (2003).

Two other recent studies have investigated the relationship between corporate governance and audit fees in the UK. The first study, by Zaman et al. (2011), examines the influence of audit committee effectiveness, a proxy for governance quality, on audit and non-audit fees, using a new composite measure comprising audit committee independence, expertise, diligence and size. However, the study only involves a sample of companies listed on the FTSE 350. Utilising Data from 135 companies (540 company year observations) between the years 2001-2004, they found enough evidence to conclude that audit committee effectiveness (ACE) has a significant and positive impact on audit fees after controlling for board characteristics. As the Smith Report was only published in 2003, Zaman et al. (2011) do not really capture the effect of governance change following the recommendations of the Smith Report (2003), especially with regard to audit committee characteristics. In another UK study, Adelopo et al. (2012) examine the impact of ownership structure on audit pricing using the number of Multiple Large Shareholders (MLS) for 209 listed companies on FTSE 350 in 2005 and 2006. Although Adelopo et al. (2012) use a bigger sample size than Zaman et al. (2011) and focus on a period after the introduction

of the Smith (2003) induced reforms, the study focuses only on the impact of ownership structure particularly Multiple Large Shareholders and audit committee activity on auditor remuneration. Adelopo et al. (2012) found that the majority of listed firms in the UK have multiple large shareholders and their one-way ANOVA result showed that there are statistically significant differences in the audit fees, firm size and audit committee activities of the firms under study when they are categorised into "widely held", "concentrated" and "highly concentrated" firms.

Many studies in the US have studied the relationship between governance characteristics and audit pricing. For example, Carcello et al. (2002) based their study of audit pricing and board characteristics on data from 1992-1993; Abbott et al. (2003) focused on the impact of audit committee characteristics and non-audit fees on audit pricing using data from 2001; Lee and Mande (2005) focused on audit committees using 2000 data; Mitra et al. (2007) focused on ownership and audit pricing using 2000 data; Vafeas and Waegelein (2007) focused on audit fees using 2001-2003 data; Ittonen et al. (2008) focused on audit committees and used 2006 data; Abbott et al. (2009) focused on audit committees and non-audit fees using 2001 data while Krishnan and Visvanathan (2009) focused on audit committees using 2000-2002 data.

Although there are similarities between the US and UK markets, there are also important differences, especially with regard to the regulatory framework in respect of auditing and governance. Past studies (e.g. Beekes and Brown, 2006; Collett and Hrasky, 2005; Conyon, 2000; and Doidge et al., 2007) highlighted that there are indeed differences between the US, Australia and the UK environment in terms of corporate governance. The key difference between UK and US corporate governance practice is their focus on corporate governance. This is highlighted by Ethiopis Tafara, Director at the Office of International Affairs of the U.S. Securities and Exchange Commission, in his speech delivered at the Institute of Chartered Accountants in England and Wales, London, United Kingdom, on January 9, 2007.

> "The US corporate governance system is commonly held out as the exemplar of the 'regulator-led' approach to corporate governance, in which the SEC and the exchanges are responsible for implementing and enforcing good corporate governance standards. By contrast, in the UK shareholders are given the autonomy and the authority to decide what corporate governance measures are necessary and appropriate to protect their interests."

This means that as compared to US corporate governance, which is more legislative in nature, UK corporate governance is based on self-regulation. UK listed companies are encouraged to comply with the recommendations of the Combined Code, but are also at liberty not to do so provided appropriate explanation is provided in the annual report (Gafran and O'Sullivan, 2013). Due to this fact, there will be more variations in governance practice in the UK as listed companies have more freedom to choose any governance practice as long as in their opinion it will be beneficial to the company and the shareholders. This is supported by Zaman et al. (2011) who suggest that there is greater variation in board composition in the UK than in the US, while Peasnell et al. (2005) point out that audit committees are not mandatory in the UK. Collier and Zaman (2005) also document significant differences in national requirements and recommendations relating to audit committees for the two countries. This variation in the UK allows the researcher to capture more meaningfully the relationship between governance characteristics, especially the board of directors, audit committee and ownership structure, with the external governance mechanism, namely the auditor, than in studies on the US, where there is strict regulation. This is supported by Aguilera et al. (2006), who suggest that results from US studies may not be totally applicable to a different setting such as the UK.

Recent corporate scandals and failures have also increased concern about the independence of auditors providing non-audit services to their audit clients. As a result, the issues of independence in appearance and independence in fact are subject to increased discussion and investigation (e.g. Srinidhi and Gul, 2007; Lim and Tan, 2008; Krishnan et al., 2005; Francis and Ke, 2006). The provision

of non-audit services may tarnish the independence of the auditor in terms of giving judgments on whether the financial statements are a true and fair view and in disclosing any risk or possible going concern issues. In addressing these independence issues many parties have suggested total prohibition of provision of non-audit services by auditors to their audit clients. As a result of this concern, the Auditing Practices Board (APB) has issued consultation on this matter, surveying the opinions of many parties. In response to this, the accounting profession has formed a working group to investigate and discuss this matter and has come up with many suggestions to improve the independence of the auditor, including improvements in the way non-audit fees are disclosed in financial statements. The shareholders of FTSE 100 companies in the UK, for example, are reported to oppose a total ban on non-audit services and believe that total prohibition will in fact have a negative impact on company performance (Christodoulou, 2010).

At European level, the European Commission launched its Green Paper on audit policy (European Commission, 2010) and raised the question whether the role of auditors can be enhanced to mitigate any future financial risk. Following this discussion, on 30 November 2011 the European Commission presented its proposals regarding the statutory audit of public-interest entities (European Commission, 2011). A maximum term of audit engagement of six years, which can be extended to nine if joint audits are performed, and a prohibition against providing non-audit services to audit clients are key elements of the proposals. Quick (2012) concludes that the provision of non-audit services might affect independence in appearance negatively; however, a total ban would not be necessary. In addition, he suggests that limiting the proportion of fees an audit firm can receive from a single client as well as a cap on non-audit fees seem to be desirable. So, the relationship between audit fees and non-audit fees to find out whether the provision of non-audit fees actually has a negative relationship with audit fees is a really interesting area for investigation. It is also suggested by the working group (Working Group on Provision of Non-audit Services by Audit Firms to Listed Audit Clients, 2010) that the way non-audit fees are presented in financial statements invites unnecessary criticism as some compulsory audits are treated as non-audit services (ICAS, 2010). The new

disclosure requirements introduced by the Companies (Disclosure of Auditor Remuneration and Liability Agreements) Regulations 2005, later superseded by the Companies (Disclosure of Auditor Remuneration and Liability Agreements) Regulations 2008, require companies to disclose details of audit fees paid to the auditor. With this detailed disclosure, further investigation to find individual relationships between audit fees and specific components of non-audit fees will be possible.

Furthermore, since this study commenced, the world economy has undergone an unprecedented economic crisis (Rose and Spiegel, 2009). A recent report (Bank of England, 2009) indicates that the economic crisis started in 2008 in UK and a slow recovery started in 2009. It is reported that UK real GDP fell by 5.5% between 2008 quarter 1 and 2009 quarter 2 (Bank of England, 2009). From early 2010 world economic recovery stabilised, the situation on the global financial markets calmed down and crisis measures started to be withdrawn (Berg, 2012). A recent study (D.H. Erkens et al., 2012) shows that corporate governance had an effect on financial firms during the economic crisis. The result of the study shows that firms with more independent boards and greater institutional ownership experienced worse stock returns during the crisis period. Based on agency theory, management will increase earnings management in order to convey a better picture of the company during a crisis period so that they get better rewards. Therefore, the audit risk during this period would increase, hence affecting the audit scope and the audit fees charged by the auditor. On the other hand, with the economic crisis highlighting the weaknesses of corporate governance, the regulator requires the company to increase the effectiveness of their internal governance characteristics for survival of the business. These new requirements will strengthen internal control of the business and therefore reduce audit risk and consequently reduce the audit fees charged by the auditors to their audit clients. It was therefore decided that the scope of the study should be extended to capture data post-crisis, that is, to the year 2010, so as to investigate whether the financial crisis has had an impact on the nature and extent of the internal governance-audit fee relationship.

1.3 Research Objectives

To address the gap that exists in prior literature on audit pricing and governance characteristics, the aim of this study is to investigate the impact of companies' internal governance characteristics and auditor independence on audit quality, proxied by the audit fees paid by listed companies in the United Kingdom. At the end of the research, the following research objectives should have been achieved:

1) Analyse the impact of an effective board of directors on audit fees.
2) Analyse the impact of an effective audit committee on audit fees.
3) Analyse the impact of ownership structure on audit fees.
4) Establish the relationship between non-audit fees and audit fees.
5) Analyse the impact of economic crisis on the relationship between governance characteristics and audit fees.
6) Analyse the impact of economic crisis on the relationship between non-audit and audit fees.

These research objectives will be expressed as hypotheses which will be tested with secondary data collected and analysed appropriately in chapter 6.

1.4 Contribution of the Study

This study extends and contributes to prior literature in a number of ways. First, this study incorporates more corporate governance characteristics as compared to previous studies. Therefore it contributes to the body of knowledge by providing a detailed examination of the association between a comprehensive range of corporate governance characteristics and audit fees. This study includes details of board characteristics, audit committee characteristics and ownership structure. To investigate the relationship between audit fees and board characteristics, variables are used to measure board size, board independence (measured by CEO duality, percentage of non-executive directors and percentage of independent non-executive directors) and board activity (measured by number of board meetings). For Audit committee characteristics, this study includes audit committee size, audit committee activity (measured by number of audit committee meetings), audit committee commitment (measured by

weighted average attendance of audit committee members), audit committee independence (measured by percentage of independent non-executive directors on audit committee), audit committee expertise (measured by percentage of audit committee with financial expertise, percentage of audit committee with accounting expertise and percentage of audit committee with supervisory expertise) and also a composite variable measuring audit committee effectiveness, calculated using earlier variables. For ownership structure, the percentage of block ownership, number of blockholders, percentage of executive share ownership and percentage of non-executive share ownership are used to measure ownership. Most of the prior studies in the UK (e.g. O'Sullivan, 1999; O'Sullivan, 2000; Peel and Clatworthy, 2001) used data from the 1990s to investigate the relationship between corporate governance characteristics and audit fees. Even though these studies took governance characteristics into account, in particular board characteristics, none of them included details on audit committee characteristics. Later, Zaman et al. (2011) and Adelopo et al. (2012) investigated the relationship between governance characteristics and audit fees. However, neither of these studies included details of both board and audit committee characteristics. Zaman et al. (2011) focused solely on the relationship between audit committee effectiveness and audit fees, using a new composite comprising audit committee independence, expertise, diligence and size, while Adelopo et al. (2012) focused more on the ownership structure, especially Multiple Large Shareholders (MLS) and audit fees.

The second contribution of the study is the inclusion of smaller companies, which were ignored in previous studies. The final sample of this study is made up of 384 companies listed on FTSE all shares, including FTSE small capital. Therefore, this research uses a bigger sample than previous studies, hence increasing the generalisability of the results. Zaman et al. (2011), for example, only utilised data on 135 companies from the FTSE 350, while Adelopo et al. (2012) used data from 209 companies, also from the FTSE 350.

Third, this study investigates the relationship between audit fees and the individual components of non-audit fees, which was previously not possible using published data. There are new requirements (The Companies (Disclosure

of Auditor Remuneration and Liability Agreements) Regulations 2005) for companies to disclose details of the audit and non-audit fees paid to the auditor. Because of these new requirements, information is available on the amount of non-audit fees purchased from the incumbent auditor in specified categories. As a result, the study investigates which components of non-audit fees contribute, positively or negatively, to the relationship between audit fees and non-audit fees. This could shed some light on whether the provision of non-audit fees really affects the independence of the auditor. The independence of the auditor normally relates to the provision of management advice to their audit client and not the provision of essential accounting services that enable listed companies to comply with legal and regulatory requirements. Beattie et al. (1996) concluded that the profession is inviting unnecessary criticism by bundling essential compliances services with a limited amount of consultancy work into a single disclosure figure and it would be advantageous to show a split figure. As these regulations came into force immediately: for financial years beginning on or after 1st October 2005, the use of 2007 data will provide reliable information with which to investigate the relationship between audit fees and specific types of non-audit services.

Fourth, unlike almost all prior studies, this study includes financial institutions. It will therefore offer additional insights on a company sector which has been under severe governance scrutiny following the collapse of many banking and financial institutions during the recent financial crisis in the UK. It will also allow me to obtain further insights on the impact of the increased regulation of companies on the governance-audit pricing relationship. Finance companies (excluding investment companies) represent 18.7% of the sample firms.

The fifth contribution of this study is that in addition to 2007 data, 2010 data representing the post-financial crisis period is included. This allows an interesting investigation of the impact of the financial crisis on the relationship between internal governance characteristics and audit fees. A comparative analysis between 2007 (pre-economic crisis) and 2010 (post-economic crisis) should reveal whether the relationship between corporate governance and audit quality is stronger in the post than pre-economic crisis period or vice versa. This

also could increase understanding on corporate governance and how it is applied in different economic environments.

Finally, this study explores in detail the relationship between corporate governance characteristics and audit fees as well as the relationship between non-audit fees and audit fees. Therefore, this study also contributes to understanding issues of auditor independence and corporate governance effectiveness in the UK, especially following current discussions among the public policy and regulatory bodies surrounding these two issues.

1.5 Structure of Study

This chapter has discussed the motivation and background of the study as well as identifying how the study will contribute to existing academic knowledge in the area. Chapter two discusses the regulation of corporate governance and auditing in the UK, including the development of corporate governance regulation in the UK since the Cadbury report. Chapter three provides a comprehensive review of prior research in the field of audit pricing and corporate governance. At the end of the discussion, a table is presented to summarise the key studies since 1990. This is followed by discussion in Chapter four of the theoretical underpinning of the study and hypotheses development. There is also discussion on control variables used in the study which are normally included in other audit pricing studies. Chapter five outlines the research methodology adopted in this study and develops a number of testable hypotheses. First, the research methods are described and justified. This includes explanation of the rationale and importance of the selected sample and details of how it differs from samples used in previous UK studies. Chapter six presents and discusses the empirical results. It starts with descriptive statistics and correlation analysis for the variables concerned and then presents the multivariate results, with a discussion of the findings in the context of the hypotheses outlined in chapter three. Chapter seven presents a summary of this research study and draws conclusions and implications. This chapter also highlights the study's potential limitations and provides recommendations both for practitioners and policy-makers as well as suggesting avenues for future research.

CHAPTER 2: Corporate Governance and Auditing in the UK

2.1 Introduction

The objective of this chapter is to give background on UK Corporate Governance and auditing. The chapter first provides a definition of corporate governance, followed by background on corporate governance and auditing in the UK. The UK corporate governance approach which is more a principle-based or "comply or explain" approach and the advantages of the approach are also discussed. Then, the development of corporate governance and auditing in the UK is highlighted, from the setting up of the Cadbury Committee in 1992 to the latest developments. Finally, the research gap due to these developments is identified.

2.2 Corporate Governance

Discussion of Corporate Governance has become more frequent due to the increase in high profile corporate failures involving the alleged misbehaviour of management in carrying out their agency duties in managing the business. Despite the widespread use of the term, corporate governance has no generally accepted definition (Rezaee, 2009). The reason for this is that the term is widely used across many disciplines, such as management, law, behavioural sciences and humanities (Adelopo and Jallow, 2010). Both the private and public sector are concerned about the quality of corporate governance. However, regulators tend to narrow down the definition, especially in an economic context, by referring to corporate governance as an entire system of controls, financial and otherwise, which ensure that a firm is directed in the right way and towards the right direction (Cadbury, 1992). Despite the diverse definitions and meanings attributed to the term, the importance of corporate governance is an undeniable fact.

Narrowing the focus of governance down to shareholder-owned corporations, it is generally accepted that two types of governance mechanisms are available in seeking to ensure that managers pursue shareholders' objectives in their administration of companies – internal governance and external governance. First, external control mechanisms include the regulatory framework, which has

produced many important corporate governance reports, such as the Cadbury Report (1992), the Hampel Report (1998), the Higgs Report (2003), the Smith Report (2003) and the Walker Report (2010). The second external governance mechanism is the market for corporate control – in other words, poorly performing companies face increased likelihood of being taken over by another company. The third external control mechanism is the existence of the managerial labour market, which focuses on such issues as retention, removal and also management image related to poor performance. Another important external governance mechanism available to the shareholders is the external audit. In addition, a number of internal governance mechanisms also seek to strengthen the quality of corporate governance. These include ownership structure, the board of directors, audit committees and companies' internal audit function. This study will focus more on the relationship between internal governance and monitoring mechanisms as the combination of strong internal mechanisms with effective monitoring mechanisms constitutes strong overall governance.

2.2.1 Corporate Governance and Auditing in the UK

Good corporate governance is very important as high quality corporate governance helps to underpin long-term company performance. The Financial Reporting Council (FRC) claim**s** that the UK has some of the highest standards of corporate governance in the world, which makes the UK market attractive to new investment (FRC 2010). The UK Approach to Corporate Governance (2010) points out that the key aspect of corporate governance in the UK is that a single board is collectively responsible for the sustainable success of the company, which means that checks and balances are needed. These checks and balances include the separation of Chairman and Chief Executive positions, balance of executive and independent non-executive directors, strong independent audit and remuneration committees, and finally, an annual evaluation by the board of its performance. It is very important to ensure that systems of appointment and remuneration are transparent. Besides that, there should be effective rights for shareholders, who should be encouraged to engage with the companies in which they invest. In addition, the external auditor will act as a complementary safeguard for the company. The auditor will act as a public

watchdog to ensure that the financial statements prepared by management are free of material misstatement and errors. The financial statements prepared by the management will be audited by the external auditor to assess whether relevant accounting methods and procedures have been followed and whether the company account is a true and fair view.

In contrast to the rule-based corporate governance practice in the US, the UK approach to corporate governance is more principle based, which could help the UK remain competitive in the global market. This fact was highlighted by the Rt Hon Nick Anstee, Lord Mayor of the City of London, in 2010, in his foreward to the UK Approach to Corporate Governance report (2010). The Mayor wrote:

"The UK's system of business regulation, which is principles rather than rules based, also reduces the cost to global businesses of introducing procedures to comply with detailed regulations, many of which unnecessarily constrain business practice and innovation. Of course, there continues to be public and political pressure for better regulation of the City and this must be accepted and acted upon. However, better regulation should be part of the framework for economic growth, directed at the next crisis rather than the last. Excessive regulation could damage the spirit of innovation that the UK economy needs."

Corporate governance in the UK is guided by the UK Corporate Governance Code, which was first issued in 1992. The series of Codes, published almost every two years, has been instrumental in spreading best practice among listed companies in the UK. The Combined Codes set out good practice covering issues such as board composition and effectiveness, the role of board committees, risk management, remuneration and relations with the shareholders. Corporate governance in the UK is based on the "comply or explain" principle and this is different from the rule-based corporate governance practices in the US. Practically all listed companies are required under the UK Listing Rules either to comply with the provisions of the Code or explain to investors in their next annual report why they have not done so. The shareholders also could play a role in monitoring the company's direction. If shareholders are not satisfied with the non-compliance and the explanation given by the company, they can use their powers, including the power to appoint and remove directors, to hold

the company to account. To complement the Combined Codes and enhance the effectiveness of corporate governance in UK, the Stewardship Code was introduced in 2010. Investors are encouraged to sign up to the Stewardship Code, which sets standards for their monitoring of and engaging with the companies in which they invest.

There are a number of advantages to this "comply or explain" approach. First, its inherent flexibility means that it is possible to set more demanding standards than can be done through hard rules. Experience has shown that the vast majority of companies set such standards as part of good corporate governance in maintaining the company's survival (FRC, 2010). This is proved by a report by Governance Metrics International in September 2009 that the UK ranked second in a table showing average governance performance by companies in different countries (FRC 2010).

Second, it is proportionate and capable of dealing with a wide variety of circumstances. This means that there is a relative lack of prescription as to how a company's board organises itself and exercises its responsibilities; however, companies are provided with some guidance to manage their corporate governance. The UK Corporate Governance Codes identifies good governance practices but companies can choose to adopt a different approach if that is more appropriate to their circumstances. This flexibility encourages the spirit of innovation which is needed by the UK economy to grow and compete in the global market.

Third, any non-compliance with recommendations in the Codes will be reported in the annual report. This shows that the key relationship is between the company and its shareholders, not between the company and the securities regulator or stock exchange. In other words, the decision on whether a company's governance is adequate is taken by those in whose interest the board is meant to act (FRC 2010). This is because the shareholders have voting rights and rights to information, set out in company law and the Listing Rules, which enable them to hold the board to account. In addition, boards and shareholders are encouraged to engage in dialogue on corporate governance matters to ensure high quality corporate governance will be in place that could benefit everyone.

The Financial Reporting Council highlighted certain reasons why this approach is chosen by the UK. First, a regulatory framework that aims to improve standards of corporate governance is more likely to succeed if it recognises that governance should support, not constrain, entrepreneurial leadership of the company, while ensuring risk is properly managed. Thus a degree of flexibility in the way companies adopt and adapt governance practices is required. This is because effective corporate governance should be implemented in a way that fits the culture and organisation of the individual company. This can vary enormously from company to company, depending on factors such as size, ownership structure and the complexity of its activities. In addition, it is important that boards see good governance as a means to improve their performance, not just as a compliance exercise. This could motivate a healthy culture towards success and survival of the business.

Finally, the FRC highlighted that an assessment of whether the company's governance practices are effective in underpinning the sustainable success of the company should be made by the intended beneficiaries - i.e. the shareholders. This is important as well-informed and engaged investors are able to take a pragmatic approach about how to apply best practice in a way that is in the best long-term interests of the company. To ensure that the investors have the information they need to make that assessment, companies are required to disclose in their annual report any non-compliance with best practice together with the reasons for non-compliance.

To ensure the relevance of the codes, they are revised and updated every two years. Any changes are subject to extensive consultation and dialogue with the market (FRC 2013). The most recent editions of the Codes were published in September 2012. In addition to the UK Corporate Governance Code, the FRC also publishes a series of guidance notes intended to assist companies in addressing specific aspects of governance and accountability. They cover board effectiveness, risk management and internal control, the role of audit committees, and assessing and reporting on whether the business is a going concern.

2.2.2 Development of Corporate Governance and Auditing in the UK

Initial corporate governance developments in the UK began in the early 1990s in the wake of corporate scandals such as Polly Peck, BCCI and Maxwell. Financial reporting irregularities led to the establishment of the *Committee on the Financial Aspects of Corporate Governance*, led by Sir Adrian Cadbury and subsequently the publication of the *Cadbury Report* in 1992. Following this, a number of other governance reports and codes have been produced. This chapter will discuss the development of corporate governance in the UK from early 1990s to the most recent development. It is important to understand and be aware of these developments as when pricing their service auditor normally take into consideration the corporate governance quality of a company to avoid or reduce audit risk. The compliance to the relevant corporate governance codes by companies would reflect good quality corporate governance practice**.**

The Cadbury Committee Report (1992)

The committee was set up as a result of increasing concerns and dissatisfaction among public towards corporate misbehaviour. Public confidence in governance of the corporations is declining as a result of the top management dominance and lack of transparency in the accounting and auditing practices.

The recommendations of the committee covered various aspects of the corporation including the structure and composition of the main board, structure and operations of key board standing and ad hoc committees, the role of non-executive directors and the reporting and control mechanisms in corporate entities in the UK. Basically the report covers subjects covering the board structure, non-executive directors, executive directors and reporting and controls.

On the topic of structure and composition of the board, the committee recommended that the board should meet regularly, retain full and effective control over the company and monitor the executive management. There should be a balance of power and responsibilities at the top of the company with no individual having unfettered powers of decision-making. The roles of the

chairman and chief executive of the organisation should be vested in different individuals, but with clearly defined roles and responsibilities for each office. This is to prevent boardroom tussles and power play by achieving a balance of power and compensating controls within the board itself. The board should have a set of matters reserved for its attention.

On the issue of non-executive directors, the committee recommended that they should bring an independent judgment to bear on issues of strategy, performance and resources. They should form the majority of the membership of the board and be independent of the management. They should be appointed for a specified term without automatic reappointment. On executive directors, the committee recommended that directors' service contracts should not exceed three years without shareholders' approval and executive director' pay should be subject to the recommendations of a remuneration committee made up wholly or mainly of non-executive directors. There should be full and clear disclosure of directors' total emoluments and those of the chairman and highest-paid UK director, including pension contributions and stock options. Separate figures should be given for salary and performance-related elements and the basis on which performance is measured should be explained. On reporting and control, it recommended that the board should establish an Audit Committee of at least three non-executive directors with written terms of reference that deal clearly with its authority and duties.

The Greenbury Committee (1995)

The report was issued following public concern and the outcry over excessive directors' remuneration, and huge payments for poor performance and ridiculous severance payment packages popularly referred to variously as "golden handshakes", "golden parachutes", "golden handcuffs" etc. Equally, executive share options especially in certain privatised utility companies were becoming excessive and questionable. The committee also produced a Code of Best Practice which deals with the following issues:

1. The establishment, membership and status of remuneration committees

2. The determination of remuneration policy for executive directors and other senior executives
3. The disclosure and approval of the details of remuneration policy and
4. The length of service contracts and the determination of compensation when these are terminated.

The code of best practice is to be implemented by listed companies but the 'comply or explain' non-compliance mechanism is also applied. With regards to the establishment of a remuneration committee, Greenbury suggested that all public companies should have a standing remuneration committee comprising of wholly non-executive directors with a minimum of three members with clearly defined terms of reference. For all aspect of remuneration, full disclosures that form part of the information in the financial statements of public companies are recommended. This disclosure should include all elements of total level of remuneration, disaggregating total remuneration into all its component parts. Therefore the annual bonus scheme and long-term incentive schemes including executive share options are all to be disclosed for every director in the company. Further, the measures of performance which are to be used in the determination of the reward packages and the relationship between these rewards and the long term objectives of the firm are all to be disclosed.

The Hampel Report 1998

The Hampel committee was established in November 1995 by Sir Sydney Lipworth, the chairman of the Financial Reporting Council. Hampel Report was published in 1998 and it endorses most of the recommendations of the Cadbury and Greenbury Reports. The area of concern includes board structure, the separation of the roles of the chairman from the chief executive, board balance and the role of the non-executive directors on the board. The role of institutional investors in governance, the relationship with shareholders and the role of auditors in Corporate Governance also highlighted in the report. The committee believes that stakeholders' interests should be protected but not at the expense and survival of the business (BBC News, 1998).

The Turnbull Report (1999)

The Turnbull Committee was set up by the Institute of Chartered Accountants in England and Wales to provide guidelines on the implementation of the internal control requirements of the Combined Code 1998. The Turnbull Report (1999) focused on three main provisions of the Combined Code concerning a sound system of internal control to safeguard shareholders' investments and company assets, and the need for the directors to conduct a review of the effectiveness of the group's system of internal control annually and to report to shareholders that they have done so. The report asserted the responsibility of the directors in respect of internal control and risk management. It emphasised that directors need to ascertain that appropriate internal control procedures are in place and that they are working. The nature and kind of risks facing the organisation do change and directors need to be aware of these and review the procedures in place to be certain of their adequacy and relevance in view of the nature of new risks confronting the organisation.

The Higgs Committee Report (2003)

The Higgs Committee reported on the role and effectiveness of non-executive directors. This is in response to corporate turbulence especially the the collapse of big companies in the USA, Enron and WorldCom. The report supports most of the earlier recommendations contained in the Combined Code and made additional recommendations such as requesting listed companies to disclose in their annual reports the number of meetings of the board and its committees as well as the attendance record of the individual directors. It endorsed the recommendation that the position of the chief executive and chairman of the board should be separated, non-executive directors should meet as a group at least once a year without executive directors being present and annual reports should indicate that such a meeting had been held.

The Smith Committee Report (2003) and Guidance on Audit Committees (2010) and (2012)

Smith Committee Reports (2003) was released around the time Higgs Report is made available, in January 2003. The committee reported on five main areas of the Audit Committee which cover it's purpose, membership, relationship with the board, roles and responsibilities and communications with shareholders. The committee emphasised the important role of the Audit Committee in the bigger picture of Corporate Governance as the audit committee which is independent of the management could protect shareholders' interests better.The following recommendations to be included in the next Combined Code are proposed;

a. All audit committee members should be independent directors
b. At least one of whom should have recent and relevant financial experience
c. The audit committee should have primary responsibility for all aspects of the company's relationship with the external auditors
d. The committee should make an annual report to shareholders, to include an explanation as to how the auditor's objectivity and independence is maintained in cases where the auditor is also employed to provide non-audit services to the company.
e. Audit committees should have at least three members (two in the case of smaller companies)
f. Audit committee members should not serve for more than two three-year terms, and
g. There should be a minimum of three meetings per year. (2003).

Subsequent revisions of the Combined Code in 2006 and 2008 as well as the *UK Corporate Governance Code* in 2010 and 2012 have basically carried forward the existing recommendations for audit committees as recommended by the Smith Report (2003). The latest revision of the report is known as Guidance on Audit Committees (2012). This guidance incorporates additional wording intended to help the implemention of the recommendations of the Sharman Inquiry on going concern.

The Combined Code (2003), (2006) and (2008) and UK Corporate Governance Code 2010 and (2012)

Since its first edition in 1998, the Combined Code has been updated on a regular basis in line with developments in the corporate environment and changes in the global Corporate Governance guidelines that are deemed necessary in the context of the UK. The "Comply or Explain" approach is still applied. The new editions of the Combined Codes normally come with some amendments to the previous ones. For example, the Combined Codes 2003 replaces the Combined Code issued by the Hampel Committee on Corporate Governance in June 1998. It derives from a review of the role and effectiveness of non-executive directors by Derek Higgs (Higgs, 2003) and a review of audit committees by a group led by Sir Robert Smith (Smith, 2003). The new Code calls for the following changes:

a. A separation of the roles of the Chairman and Chief Executive. The Chairman should satisfy the criteria for independence on appointment, but should not, thereafter, be considered independent when assessing the balance of board membership;
b. A Board of at least half independent NEDs. The Code defines independence as recommended by the Higgs Report;
c. Candidates for Board selection to be drawn from a wider pool;
d. The Board, its committees and directors to be subject to an annual performance review;
e. At least one member of the audit committee to have recent and relevant financial experience; and
f. In contrast to the Higgs Report, the revised Code permits the Chairman to chair the nominations committee, except where the committee is considering the appointment of the chairman's successor.

Two major changes is introduced in the Combined Code (2008) as compared to Combined Code (2006). Firstly, it removes the restriction on an individual chairing more than one FTSE 100 company. Secondly, for listed companies outside the FTSE 350, it allows the company chairman to sit on the Audit Committee where he or she was considered independent on appointment

(Combined Code, 2008). The UK Corporate Governance Code (formerly the Combined Code) was updated in June 2010 following an extensive review carried out by the FRC in parallel with Sir David Walker's review of corporate governance in the financial sector. Among the changes as compared to the Combined Codes 2008 are:

a. To encourage boards to be well balanced and avoid "group think", there are new principles on the composition and selection of the board, including the need to appoint members on merit, against objective criteria, and with due regard for the benefits of diversity, including gender diversity.
b. To promote proper debate in the boardroom, there are new principles on the leadership of the chairman, the responsibility of the nonexecutive directors to provide constructive challenge, and the time commitment expected of all directors.
c. To help enhance the board's performance and awareness of its strengths and weaknesses, the chairman should hold regular development reviews with each director and board evaluation reviews in FTSE 350 companies should be externally facilitated at least every three years.
d. To increase accountability to shareholders, all directors of FTSE 350 companies should be re-elected annually and chairmen are encouraged to report personally on how the principles relating to the leadership and effectiveness of the board have been applied.
e. To improve risk management, the company's business model should be explained and the board should be responsible for determining the nature and extent of the significant risks it is willing to take.
f. Performance-related pay should be aligned to the long-term interests of the company and its risk policies and systems.

It is also reported that Implementation of the UK Corporate Governance Code by listed companies has generally been good. FRC reports high rates of compliance with most provisions of the Code by companies of all sizes. There has been an encouraging response to the changes made to the Code in 2010 where eighty percent of FTSE 350 companies put all their directors up for re-election, while more companies are bringing in external advisers to assist with

evaluation of the board's effectiveness. In addition, many company chairmen and committee chairs make a personal statement in the annual report. It is also reported that it was clear from a series of meetings with directors and others held earlier in the following year that boards are now paying considerable attention to understanding and overseeing the main risks facing the business, as required by the Code.

The revised Code (2012) issued in September 2012 followed a consultation exercise seeking views on whether to amend the UK Corporate Governance Code and the associated Guidance on Audit committees. The main changes to the UK Corporate Governance Code included that boards should confirm that the annual report and accounts taken as a whole are fair, balanced and understandable, that audit committees should report more fully on their activities, and that FTSE 350 companies should put the external audit contract out to tender at least every ten years. In addition, companies are also required to report on their boardroom diversity policies. As with all existing provisions of the Code, these additions are subject to the "comply or explain" approach.

The companies (Disclosure of Auditor Remuneration and Liability Agreements) Regulations 2005

Following the corporate scandals of earlier in the decade, including Enron and WorldCom, the regulation of auditors in the UK was reviewed and one aspect of that review was the provision of non-audit services by a company auditor. The Companies (Disclosure of Auditor Remuneration) Regulations 2005 were made on 25 st August 2005 after consultation with a range of stakeholders. They were laid before parliament on 31 st August 2005 and came into force on 1st October 2005. Section 4 of the regulations clearly state that the notes to the account of a company shall disclose the amount of any remuneration receivable for auditing of the accounts and the supply of other services.

In addition, schedule 2 of the act details out the services to be disclosed in the company annual report:

a. The auditing of accounts of associates of the company pursuant to

b. legislation (including that of countries and territories outside Great Britain).

a. Other services supplied pursuant to such legislation.
b. Other services relating to taxation.
c. Services relating to information technology.
d. Internal audit services.
e. Valuation and actuarial services.
f. Services relating to litigation.
g. Services relating to recruitment and remuneration.
h. Services relating to corporate finance transactions entered into or proposed to be entered into by or on behalf of the company or any of its associates.
i. All other services.

On 6th of April 2008, the Companies (Disclosure of Auditor Remuneration and Liability Agreements) Regulations 2008 were coming into force. These regulations require companies to disclose in their annual accounts the amounts payable for the services they and their associates have purchased from their auditors and their associates. They also require companies to disclose whether they have entered into a liability limitation agreement with their auditors, and if so, to provide certain information about that agreement. They replace the existing Companies (Disclosure of Auditor Remuneration) Regulations 2005 (SI 2005/2417).

On 1 October 2011 new regulations (Companies (Disclosure of Auditor Remuneration) Regulations 2005) for how companies report the fees they have paid their auditor came into force. To help businesses of all sizes disclose the right sums, ICAEW has published detailed guidance. The companies are legally required to disclose the amount of fees they pay auditors, with large companies and groups also being required to provide detailed break-downs of the amount of money spent on audit and non-audit services. This fact is made clear by Dr Nigel Sleigh-Johnson, Head of ICAEW's Financial Reporting Faculty, who said:

> "All UK companies are legally required to disclose the amount of money they have paid their auditor in their annual reports, with large companies

also being required to provide a detailed breakdown of the amount paid by the type of service bought.

"The new legislation changes the way non-audit services are classified.. As it is not always straightforward to work out which audit firm services fall into which categories from the legal text, ICAEW's Financial Reporting Faculty has issued a technical release that provides detailed guidance to help UK companies determine how to break down and present the information in accordance with the new legal requirements."

Detailed explanation on the purpose of the regulation which is to require the companies to disclose services (both audit and non-audit services) provided by their auditor, and the fees paid for those services, in notes to the company's annual published accounts is provided in the explanatory memorandum of the act. The new Schedule is intended to work in parallel with the Ethical Standards for Auditors produced by the Auditing Practices Board. The standards require auditors to undertake an analysis of threats to their independence (including from the provision of non-audit services) and to put in place any necessary safeguards in order to reduce those threats to an acceptable level.

UK Stewardship Code (2010) and Revised in 2012

The UK Stewardship Code was published in July 2010 with the aim to enhance the quality of engagement between institutional investors and companies to help improve long-term returns to shareholders and the efficient exercise of governance responsibilities. The Code set out good practice on engagement with investee companies to which the FRC believes institutional investors should aspire and operates on a 'comply or explain' basis. The FSA requires UK authorised asset managers to report on whether or not they apply the Code and to disclose on their websites how they have applied the Code. Since December 2010 all UK-authorised Asset Managers are required under the FSA's Conduct of Business Rules (FSA, 2010) to produce a statement of commitment to the Stewardship Code or explain why it is not appropriate to their business model. The FRC sees the UK Stewardship Code as complementary to the UK Corporate Governance Code for listed companies.

The new Stewardship Code, published in September 2012, has been more extensively revised than the UK Corporate Governance Code, although the seven principles of the Code are unchanged. The main changes to the Stewardship Code include: clarification of the respective responsibilities of asset managers and asset owners for stewardship, and for stewardship activities that they have chosen to outsource; and clearer reporting requirements, including on the policy on stock lending.

Asset managers are also encouraged to have the processes that support their stewardship activities independently verified, to provide greater assurance to their clients. The Institute of Chartered Accountants in England and Wales published in November 2012 a revised edition of the Stewardship Supplement to its guidance on assurance reporting (AAF 01/06) to enable assurance to be carried out against the revised Code. Table 1.1 on page 29 summarises the development of corporate governance since the early 1990s.

Table 2.1: Development of Corporate Governance in the UK

Year	Reports or Codes	Details
1992	Cadbury Report	Outlined a number of recommendations around the separation of the role of chief executive and chairman in an organisation, more balance in the composition of the board of directors, clearer selection processes for non-executive directors, greater transparency of financial reporting, and the need for good internal controls.
1995	Greenbury Report	Extensive disclosure in Annual Reports on remuneration and recommended the establishment of a remuneration committee comprised of non-executive directors
1996	Hampel Report	Review of the extent to which the Cadbury and Greenbury Reports had been implemented and whether the objectives had been met.
1998	Combined Code of Corporate Governance (1998)	Covered areas relating to structure and operation of the board, directors' remuneration, accountability and audit, relations with institutional shareholders, and the responsibilities of institutional shareholders. Also required companies to provide a statement in their Annual Report on how they have applied the Code Principle and Code Provisions relating to internal control
1999	Turnbull Guidance	Internal Control: Guidance for Directors on the Combined Code and requirement for the board to review the system of internal control and risk management.
2001	Myners Review	To consider whether there were factors distorting the investment decision-making of institutions. It included suggestions for the improvement of communication between investors and companies and encouraged institutional investors to consider their responsibilities as owners and how they should exercise their rights on behalf of beneficiaries.
2002	Directors' Remuneration Report Regulations	Increased the amount of information shareholders are given on directors' remuneration, including specific disclosures relating to performance.

2003	• Higgs Report • Smith Report • Tyson Report • Revised Combined Code of Corporate Governance.	• The Role and Effectiveness of Non-Executive Directors (requirement for at least half of board to be independent NEDs) • Guidance on Audit Committees. Provides guidance on role and responsibilities of audit committees and focus on independence of external auditors and level of non-audit services provided. • Recruitment and development of non-executive directors • Changes to the Code following recommendations from Smith Report and Tyson Report.
2005	Internal Control: Revised Guidance for Directors on the Combined Code	Produced by Turnbull Review Group
2005	The companies (Disclosure of Auditor Remuneration and Liability Agreements) Regulations 2005- superseded by The companies (Disclosure of Auditor Remuneration and Liability Agreements) Regulations 2008	Requires company to disclose details of the audit and non-audit fees paid to the auditor.

2006	Revised Combined Code of Corporate Governance	Changes to the remuneration committee, nomination committee and institutional shareholders' right to withhold their votes.
2008	Revised Combined Code of Corporate Governance	Changes include removal of the restriction in provision on an individual chairing more than one FTSE 100 company and to allow the company chairman of a smaller company (not FTSE 350) to be a member of, but not chair, the audit committee provided that he or she was considered independent on appointment.
2009	Financial Reporting Council's guidance entitled 'Going concern and liquidity risk: Guidance for directors of UK companies 2009	Guidance on going concern for directors of UK companies to assist them with their assessment of going concern and in evaluating the nature and extent of disclosures.
2009	Walker Review	Number of recommendations incorporated into the renamed 2010 UK corporate Governance Code
2010	Revised Combined Code of Corporate Governance now called *the* ***UK Corporate Governance Code 2010***	Proposed new additions to those main principles include: • The chairman will be responsible for leadership of the board and for ensuring its effectiveness. • A 'fit for purpose' obligation on the composition of boards to enable them to discharge duties and responsibilities effectively. • An obligation on non-executive directors to constructively challenge and help develop proposals on strategy. • Requirement for Directors to allocate sufficient time to perform their responsibilities effectively.

	UK Stewardship Code (2010)	Aimed to enhance the quality of engagement between institutional investors and companies to help improve long-term returns to shareholders and the efficient exercise of governance responsibilities. The Code set out good practice on engagement with investee companies.
2011	FRC's Guidance on Board Effectiveness	Provide guidance on section A and B of the Code around leadership and board effectiveness.
2012	Revisions to the Corporate Governance Code and Guidance on Audit Committees	Seeks views on changes to the UK Corporate Governance Code and to the accompanying Guidance on Audit Committees ("the Guidance"). Consultation on changes to the Stewardship Code.

2.2.3 The Impact of Governance and Non-Audit Development on Audit Pricing

The Cadbury Report (1992) was issued in response to UK governance failures such as Polly Peck, BCCI and Maxwell. The Cadbury Report outlined a number of recommendations around the separation of the role of chief executive and chairman in an organisation, more balance in the composition of the board of directors, clearer selection processes for non-executive directors, greater transparency of financial reporting, and the need for good internal controls. The Cadbury Report inspired researchers to study the relationship between audit pricing and corporate governance in more detail. Prior to the Cadbury period, most of the audit pricing studies investigated the relationship between audit fees and the presence of the board or audit committee. Using 1989-1991 data from 315 FTSE companies in the UK, Collier and Gregory (1996) investigated the relationship between audit fees and the presence of audit committee. They found that the relationship between size-related audit fees and the presence of an audit committee is positive and significant. Utilising data from the pre-Cadbury period, O'Sullivan (2000) investigated the impact of board characteristics on audit fees using data from 402 quoted companies in 1992. The finding was that the proportion of non-executive directors has a significant positive impact on audit fees. The author suggests that non-executive directors encourage more intensive audits as a complement to their own monitoring role. The same author was also interested in the relationship between board characteristics and audit fees, post-Cadbury period. O'Sullivan (1999) investigated the impact of board and audit committee characteristics on audit pricing, using data on 146 large UK listed companies at the end of the 1995 financial year. However, as compared to the study using pre-Cadbury data, this study found no evidence that board characteristics influence auditors' pricing decisions. The author claims that the absence of a relationship between internal governance characteristics and audit fees in the study may be due to a number of reasons. First, improved governance characteristics are expected to have a dual impact on audit fees: while greater use of non-executives and audit committees is expected to indicate stronger internal controls and a reduced demand for audit testing, the increased independence of the

audit function from the control of senior executives may allow auditors to undertake more extensive audits and consequently charge higher fees. Second, as audit users' expectations of non-executives' monitoring responsibilities increase, non-executive directors are expected to transfer some of this responsibility to auditors by requiring auditors to undertake more thorough audits. Since the recommendations of Cadbury (1992) have been widely adopted by UK listed companies, the variation between companies in respect of governance characteristics is likely to be small, therefore weakening the power of their empirical tests. O'Sullivan and Diacon (2002) compared the pricing of audits in 117 UK mutual and proprietary insurance companies (including audit committees and non-audit fees) in 1992. The study found that the existence of an audit committee has a positive impact on audit fees paid by companies but audit fees are not sensitive to the composition of the audit committee.

In 2003, two reports, namely the Higgs Report (2003) and the Smith Report (2003), as well as a Revision of the UK Combined Code for Corporate Governance (2003), were issued, mainly in response to US corporate failures such as Enron, WorldCom and Tyco and associated concerns over auditor independence. The infamous Enron scandal in 2002 prompted a global shift to re-regulation in the form of the Sarbanes-Oxley Act (SOX) (2002), which introduced major changes to the US audit, financial reporting and corporate governance regimes. As discussed earlier in regard to development of corporate governance in UK, unlike the US approach of regulation through the Sarbanes-Oxley Act in response to corporate failure, the UK Combined Code for Corporate Governance (2003) sticks with the "Comply or Explain" principle. This is to encourage the innovation needed for economic growth and give the shareholders, as the real owners of the company, more power than the regulator to monitor the company. Additional requirements were introduced, such as at least half of the board should be independent non executive directors (NEDs) and annual board and director evaluation. To address the issue of auditor independence, the Smith Report (2003) provides guidance on the role and responsibilities of audit committees in dealing with external auditors. The guidance focuses on the external

auditors' independence and the level of non-audit services provided by them, in other words requiring much closer engagement between the audit committee of a company and its auditors, thus creating a much more significant role for the audit committee in the audit process.

The developments in this area inspired Zaman et al. (2011) to examine the influence of audit committee effectiveness, a proxy for governance quality on audit fees and non-audit fees, using a new composite measure comprising audit committee independence, expertise, diligence and size. This study involved 135 companies listed on FTSE 350 on the London Stock Exchange in 2001-2004. They found enough evidence to conclude that audit committee effectiveness (ACE) has significant positive impact on audit fees after controlling for board characteristics only for larger clients. Their results indicate that effective audit committees undertake more monitoring, which results in wider audit scope and higher audit fees. Contrary to their expectations, the association between ACE and NASF was found to be positive and significant, especially for larger clients. This suggests that larger clients are more likely to purchase non-audit services (NAS) even in the presence of an effective audit committee, probably due to the complexity of their activities.

On the other hand, post-Enron prohibitions on the provision of certain types of NAS led to large reductions in the amount of NAS provided by incumbent auditors (Beattie, 2012). Beattie et al. (2009) reported that a study by Deloitte (2009) documented a significant reduction in the percentage of NAS provision to audit fees provided by auditor to their audit client from 300% in 2001 to 75% in 2008. The study concluded that both regulatory changes and voluntary choices made by companies seeking to avoid criticism are the reasons for the significant reduction. The reason for substantial reduction in NAS is provided by Beattie and Fearnley (2009). Using questionaire responses from 446 qualifying UK companies, Beattie and Fearnley (2009) identified four main drivers of the changes to the non-audit regime on the decisions of UK listed company finance directors, audit committee chairs and audit partners, in 2007. First, enhanced role of the audit committee in

developing a policy for NAS purchase, as introduced by the Combined Code (2003) and the Smith Report (2003), has made audit committees more conscious of the importance of auditor independence and therefore reluctant to buy services from their auditor. Second, less visible driver is the risk to the directors of a challenge from activist investors and from adverse publicity where the level of NAS appears too high or the services disclosed appear inappropriate. Third, the requirement for auditors to comply with ES 5 has restricted their ability to provide many services, regardless of client need. Fouth, the UK's audit inspection regime has created an environment where breaches of ethical standards or inaccurate reporting of the breakdown of NAS are likely to be discovered, providing a further deterrent to NAS provision by the auditors. Beattie and Fearnley (2009) concluded that the additional restrictions have had an adversely impact on the efficiency and effectiveness of the financial reporting and auditing process, as auditors have less knowledge and understanding of the business.

Following concern over auditor independence, on 30 November 2011 the European Commission presented its proposals regarding the statutory audit of public-interest entities (European Commission, 2011). The proposal focuses on audit tenure as well as prohibition of providing non-audit services to audit clients. At UK level, the FRC has taken this issue seriously. One of the key changes in the UK Corporate governance Code (2012) is that FTSE 350 companies should put the external audit contract out to tender at least every ten years. However, this new requirement leads to many problems. It is reported (FRC 2013) that audit firms are facing fee pressures in the current economic environment, as evidenced by substantial reductions in audit fees as a consequence of audit tenders, particularly in respect of large listed entities. Responding to these pressures, audit firms are seeking efficiencies by reducing overall audit hours (FRC 2013). It is reported in the FRC's audit quality inspection report (FRC 2013) that reductions in audit hours may be achieved through the application of higher materiality levels, which reduces the size of the sample tested, and by reducing the extent of testing in areas of low audit risk. Audit firms have also been found to use samples that do not cover the entire period

or the total population, increasing the level of judgmental sampling, and in the context of group audits there have been instances where materiality applicable to business components has been increased, thus the number of business components subjected to full audit procedures has been reduced. The FRC has consequently raised concerns regarding the position of audit committees. They stress the fact that audit committees also have an important role to play in this area. It is suggested that where fee reductions have been offered, audit committees should scrutinise the proposed scope of the audit, including the determination of materiality, the attention to be given to each business component and to the significant audit risks identified. It is also suggested that if there are significant changes in these areas following fee reduction, audit committees should carefully consider whether the overall level of work to be performed is likely to be sufficient to identify material misstatements and also to ensure that audit quality is not compromised.

It is observed that over the past decades, corporate governance and auditing have developed well especially since controversial collapse of Enron in 2002. These involve changes to the supply of audit and non-audit services, with restrictions on the non-audit services that can be offered by auditors. At the same time, corporate governance developments have increased the scope and the role of the board of directors and, more importantly, audit committees in dealing with auditors. Following the development of corporate governance, the literature in audit pricing is also developed. The earlier UK studies (e.g. O'Sullivan, 1999; O'Sullivan, 2000) have examined the relationship of governance characteristics and audit fees in the pre or post Cadbury period. Literature review shows that there is still a little number of studies investigating the relationship between corporate governance characteristics and audit fees after Smith Report (2003). The quite similar study is done by Zaman et al. (2011) who investigate the relationship between audit committee effectiveness and audit fees before or around the time of the Smith Report (2003) using data of 135 FTSE 350 listed companies in 2001 to 2004. Another study (Adelopo et al., 2012) utilised data of 209 FTSE 350 companies for year end 2005/2006 but only focus on the relationship between the number of

multiple large shareholders and audit committee activity on audit fees. Given this background, this study aims to fill the gap in the literature. As compared to Zaman et al. (2011), this study contributes to the literature as more comprehensive measurements and scope of governance characteristics; including board characteristics, audit committee characteristics and ownership are used. In addition, this study utilises bigger sample companies from FTSE All Shares listed companies (384 companies) in 2007 and 2010 (768 observations). The use of more contemporary data could capture the impact of the recommendations by Smith Report (2003) and Higgs Report (2003) better as compared to Zaman et al. (2011). Another gap identified is that there is no study investigating the relationship between audit fees and detail component of non-audit services using published data. This is because, prior to 2005, this information is not publicly available. Therefore, this study makes another major contribution by using published data of detail components of non-audit services which are available since the enactment of the Companies Act (Disclosure of Auditor Remuneration and Liability Agreements) Regulations in 2005.

2.3 Chapter Summary

The chapter begins with a brief introduction to corporate governance in the UK. The importance of high quality corporate governance for long-term company performance is highlighted and the UK approach to corporate governance is explained. Basically, unlike the rule-based corporate governance practised in the US, corporate governance in the UK is more principle based and the approach is "comply or explain". Corporate governance in the UK is guided by the UK Corporate Governance Codes, which were first issued in 1992 and have been revised and updated almost every two years since. The second part of the chapter discusses the principles of corporate governance practice in the UK and the "comply or explain" approach. The advantages of the approach are discussed and the reasons for the adoption of this approach are explained.

The chapter continues by outlining the development of corporate governance in the UK. The fact that corporate governance development in the UK, starting with the

establishment of the Cadbury Committee in 1992, was initiated due to corporate scandals such as Polly Peck, BCCI and Maxwell is highlighted. Details are provided of the reports produced from 1992 to 2012, including, first, the Cadbury Committee Report (1992), followed by The Greenbury Committee report (1995) and later, the Hampel Committee report (1998) and the Turnbull Report (1999). In 2003, The Higgs Committee Report was published in the wake of other infamous scandals and corporate collapses involving Enron and WorldCom in the US. In the same year, the Smith Committee Report was published in the UK. The report emphasised the important role of the Audit Committee in the bigger picture of Corporate Governance. The latest revision of the report is known as Guidance on Audit Committees (2012). The Combined Codes, first published in 1998, are then discussed. It is highlighted that the Codes have been updated on a regular basis in line with developments in the corporate environment locally and globally. The regulation of auditors in the UK was also reviewed in light of the same corporate scandals that happened in the early years of the decade. The Companies (Disclosure of Auditor Remuneration and Liability agreements) Regulation 2005 came into force on 1st October 2005, focusing on the provision of non-audit services by a company auditor. This regulation requires detailed disclosure of non-audit services provided by the auditor to their audit client. The revision of the act was published in 6th of April 2008 with additional requirements for companies to disclose in the annual accounts the amounts payable for the services they and their associates have purchased from their auditors and their associates and whether the company have entered into a liability agreement with their auditors and if so to provide certain information about the agreement. Another revision came into force on 1st October 2011 and, to help companies to disclose the right sums, ICAEW published detailed guidance. The replacement schedule is intended to enable clearer disclosure of fees for audit and non-audit services and to work in parallel with the ethical Standards for Auditors produced by the Auditing Practice Board (APB). The standards require auditors to undertake an analysis of threats to their independence and to put in place any necessary safeguards in order to reduce these to an acceptable level. To enhance the quality of engagement between institutional investors and companies and to help

improve long-term returns to shareholders and the efficient exercise of governance responsibilities, the UK Stewardship Code was published in July 2010. FRC sees the UK Stewardship Code as complementary to the UK Corporate Governance Code for listed companies. The latest revision to the codes was published in September 2012.

The next part of the chapter discusses how developments in corporate governance in the UK have affected auditing and audit pricing. Before the Cadbury Report (1992) most of the audit pricing literature investigated the relationship between audit pricing and existence of an audit committee or the board of directors (eg: Collier and Gregory, 1996). After the release of the Cadbury Report in 1992, which highlighted the importance of non-executive directors on the board of directors and also the audit committee, researchers start investigating the relationship between governance characteristics and audit fees (eg: O'Sullivan, 1999 and Zaman et al., 2011). The development in corporate governance in the UK has increased the role of the board and also audit committees in ensuring the success and long term survival of the business. At the same time, rules have been tightened regarding non-audit services that can be offered by auditors to their audit clients, to ensure the auditor's independence. With the changes in both the supply of audit services (auditor side) and demand for audit services (company side), a new study is greatly needed in order to consider both of these factors and assess whether the relationship identified by earlier studies that used data post Cadbury Report (1992) (eg: O'Sullivan, 1999) and later data from around the time of the Smith Report (2003) (eg: Zaman et al., 2011) still stands.

CHAPTER 3: LITERATURE REVIEW

3.1 Introduction

The objective of the chapter is to review prior literature on audit pricing, corporate governance and also non-audit service. The discussion starts with a review of general audit pricing studies since the seminal paper of Simunic (1980). This discussion is followed by a review of corporate governance and audit pricing literature. The second part of the chapter provides a discussion on non-audit fees and audit pricing. The discussion starts with the general non-audit fees literature. Independence issues related to the provision of non-audit service are also highlighted. The chapter then provides a review on prior non-audit fees and audit fees studies. At the end of the chapter, the gap in audit pricing literature is identified.

3.2 Audit Pricing Literature

As the issue of corporate failure continues to attract attention and controversy, the role of auditors has come under increased scrutiny, especially due to their apparent inability to foresee and warn about impending failures, and the study of audit fees, specifically their determinants, becomes more relevant and current. According to Hay et al. (2006), there are two main reasons why researchers study the determinants of audit fees: (i) to evaluate the competitiveness of audit markets, and, (ii) to examine issues of contracting and independence related to the audit process, for example, low-balling, and the impact of non-audit services on audit pricing. Regardless of the purpose of the study, Hay et al. (2006) found that a common methodology has been developed in the course of the publication of over 100 journal articles examining the determinants of audit fees. Both auditors and their client companies can benefit from improved knowledge in this area. As for clients, better knowledge could assist them in negotiating audit fees and controlling the internal aspects that influence the amount of the audit fee (Meshari, 2008). On the other hand, it could also help the auditors to price their audit services appropriately

(Gist, 1992). Low et al. (1990, p. 292) further underline the value of audit fee studies:

> "The strength of the audit fees model is in its objectivity and its relevance to the audit function. Fees are, and should be, a direct measure of the audit effort expended in response to the risks involved in audit engagements. This basis of fees determination is decidedly fair to both auditors and their clients because it provides an objective benchmark for fees negotiation and is directly related to the services rendered"

The primary work in studying the determinants of audit and non-audit fees was conducted by Simunic (1980). Using 397 responses from a survey of publicly held corporations in the US conducted in 1977, he developed and tested a model to explain the relationship between audit fees and many different variables. The dependent variable of his study is measured by the amount of current year's external auditor fees. The factors initially identified as determining audit fees include:

a. Size (measured by total assets);
b. Complexity (measured by no. of consolidated subsidiaries; no. of two-digit SIC industries in which auditee operates; and foreign assets divided by total assets at year end).
c. Industry;
d. Audit risk (measured by net income divided by total assets; dummy variable for loss incurred during the year; and instance of the company receiving a subject to or qualified audit opinion during the year);
e. Audit tenure (no. of years);
f. Auditor type or identity (big eight or not)

The hypotheses of his study were tested by obtaining least-squares' estimates of the coefficients of the variables in the following linear regression function:

$$FEE / ASSETS^{e} = b_0 + b_1 SUBS + b_2 DIVERS + b_3 FORGN + b_4 RECV + b_5 INV + b_6 PROFIT + b_7 LOSS + b_8 SUBJ + b_9 TIME + b_{10} AUDITOR + u$$

Where:

FEE / ASSETS = the ratio of current year's external audit fee/total assets

SUBS =number of consolidated subsidiaries

DIVERS=number of two-digit SIC industries in which auditee operates, less one

FORGN=foreign assets + total assets at year-end

RECV=accounts, loans and notes receivable + total assets at year-end

INV=inventories + total assets at year-end

PROFIT = net income + total assets

LOSS =dummy variable (1,0) where (1) if auditee incurred loss in any three fiscal years

SUBJ=dummy variable (1,0) where (1) if auditee received a "subject to" qualified opinion

TIME =number of years auditee has used current auditor

AUDITOR=dummy variable (1,0) where (1) if auditor is a Big Eight audit firm

The study found that the audit fee is a function of auditee size, complexity, risk and the relative elasticity of demand for both audit and non-audit services.The model he developed has been and continues to be used widely and has been significantly expanded, with the addition of new variables by many researchers over the past 30 years. His model is widely used not only in Anglo-Saxon countries but also in other parts of the world. Studies of the determinants of audit fees have been conducted,

for example, in India (Simon et al., 1986), Singapore (Low et al., 1990), Hong Kong (Simon et al., 1992), Malaysia (Simon et al., 1992), South Africa (Simon, 1995), Bangladesh (Karim and Moizer, 1996), The Netherlands (Langendijk, 1997), Norway (Firth, 1997), Japan (Taylor, 1997), Pakistan (Simon and Taylor, 1997), South Korea (Taylor et al., 1999), Finland (Nieme, 2002), Nigeria (Taylor and Simon, 2003), Indonesia (Basioudis and Fifi, 2004), Italy (Cameran, 2005), Kuwait (Meshari, 2008) and China (Wang et al., 2009).

In their meta-analysis of many existing audit fee studies up to the year 2001, Hay et al. (2006) summarised the determinants of audit fees into three main attributes: (i) client attributes, (ii) auditor attributes, and (iii) other attributes. The most traditional determinants of audit fees that relate to client companies are client size, complexity and audit risk. As well as audit client characteristics, auditor attributes could be associated with higher or lower audit fees. Common audit pricing models normally seek to recognise "auditor effect" by including variables representing the quality of the auditor (normally measured by whether the audit firm is categorised as Big or non-Big), length of audit tenure and also the location of the audit firm. Other factors which may affect audit pricing are engagement related matters. These include factors such as report lag, 'busy season reporting' and, very importantly, the joint provision of audit and non-audit services by the same accounting firm. Discussion on these general determinants is provided in the hypotheses development chapter as this study uses these determinants as control variables to assess the impact of governance characteristics and non-audit fees on audit fees.

As the audit pricing literature developed over the years, new variables were added to the model initially introduced by Simunic (1980). Ten years after Simunic (1980), Turpen et al. (1990) examined whether auditing firms differentially price the audits of new clients, using data from 146 public companies between 1982-1984 in the USA. The study found that audit fees for new clients are significantly lower than those for continuing engagements when controlling for the influence of other audit fee determinants. The additional tests indicate that this differential persists into the second year following a change of auditor.

In the UK, Chan et al. (1993) investigated the applicability of the existing audit fee models in the UK context. The study added three new variables to the study, namely the Herfindahl diversification index, ownership control and audit location. Using data from 985 quoted companies in 1989 in the UK, they found that the results were consistent with previous research, particularly in relation to the effect on audit fee of auditee size and number of subsidiaries. In addition, a Big Eight premium was also observed for both large and small size auditees. However, not all the new variables introduced were significant in explaining audit fees. In the same year, Chan et al. (1993) further investigated the determinants of audit fees in the UK, using more variables. The study involved 280 quoted companies in 1987. The principal explanatory variables were found to be auditee size, return on shareholders' equity, the number of subsidiaries, the lag between the year end and the date of the audit report, size of the auditor, ameasure of auditee diversification, the ownership structure of the auditee, and whether the auditor was based in London, with the last three being new variables introduced in this study. Pong and Whittington (1994) used data on 577 UK listed companies between the year 1981 and the year 1988 to examine the theoretical rationale for empirical models of audit fees extant in the literature in the context of UK companies. It was found that auditee size is an important audit fee determinant. In addition, complexity, as measured by number of subsidiaries also had a positive and statistically significant effect on audit fees. However, profit had an effect which was sensitive to model specification. Small loss-making auditee firms received a discount on their audit fee but larger loss-making firms were charged a premium by their auditors. They also found that big 8 audit firms were, on average, more expensive than non-big 8 firms.

Brinn et al. (1994) tested whether earlier findings on audit fees can be generalised to the unquoted sector. Utilising data from 154 UK companies (independent and subsidiary unquoted) in electrical/electronic for the year 1988 the study found that the most significant factors affecting the audit fees of unquoted companies are auditee size and complexity. Chaney et al. (2004) investigated audit pricing among private firms in the UK using 1994-1998 data from 15,484 private firms with annual

turnover greater than 750,000. It was found that private firms do not pay such a large Big 5 premium on average and client firms choosing Big 5 auditors generally would have faced higher fees had they chosen non-Big 5 auditors, given the firm-specific characteristics. Auditees in their setting do not, on average, view Big 5 auditors as superior in terms of the perceived quality of the services provided to a degree significant enough to warrant a fee premium. Cullinan (1997) on the other hand examined the generalisability of the audit fee model by applying the model in the pension plan audit context. The study used 1991 data from 1110 US pension funds and found no differences in fee structures between Big Six and non-Big Six firms. This result indicates that auditor change does not affect pension plan audit fees. Hackenbrack et al. (2000) studied audit pricing in a municipal market. Utilising year 1995 data from 675 municipal audits in eight south-eastern states of the US the study found that Municipalities covered by the statute paid higher audit fees, engaged larger audit firms and firms with larger municipal audit client bases. They were also more likely to be recognised for excellence in financial reporting than municipalities not covered by statute. Results support the claim that audit selection criteria emphasising technical competence over low audit fee should result in selection of an auditor that will produce relatively high audit quality.

Some studies relate audit pricing with Agency theory. Nikkinen and Sahlstrom (2004) examined whether agency theory provides a general framework for audit pricing. Their study involved seven countries: Denmark, Hong Kong, Malaysia, Singapore, South Africa, Sweden and the UK, and used1992-2000 data from the largest firms in these countries. A negative relationship was found between audit fees and manager ownership and a positive relationship between audit fees and free cash flow in several countries. Therefore it was concluded that Agency theory can be used, at least to some extent, to explain audit fees internationally. Moreover, agency theory explains audit fees similarly across countries, while control variables have different impact on audit fees. Using data from 16,771 company-year observations from the year 2000-2006 in the US, excluding financial and insurance companies, Griffin et al. (2010) provided further evidence on whether audit fees

vary in relation to agency problems that can arise in companies with excess free cash flow. It was found that agency problems of companies with high free cash flow and low growth opportunities induce auditors of companies in the United States to raise audit fees to compensate for the additional effort. High FCF companies with high growth prospects have higher audit fees and debt level moderates the increase in fees, while dividend pay-out and share repurchase do not have any effect on increases in fees.

Following the implementation of the Sarbanes-Oxley Act (2002), researchers started to relate audit pricing to SOX. Griffin and Lont (2007) analysed residual increases in audit fees following SOX. The study used data from 25,851 firm-year observations over five years (2000-2005) which were audited by Big 4 or Big 5 audit firms in the US. The study found a significant relationship between residual audit fees and incremental audit risk, audit effort and auditor changes, and these factors are noticeably more influential in the period following SOX that includes the implementation of section 404 on internal control. Hoitash et al. (2008) extended prior research on audit risk adjustment by examining the association of audit pricing with internal control problems disclosed under sections 404 and 302 of the Sarbanes-Oxley Act. This study utilised data from 962 US companies from November 2004-October 2005. It was found that Audit fees are positively associated with internal control problems disclosed in the first year of implementation of section 404. In the case of broadly-based accelerated filers, audit pricing for companies with internal control problems varies by problem severity. In addition, companies disclosing internal control problems under section 302 continue to pay higher fees the following year, even if no problems are disclosed under section 405. Bedard et al. (2008) examined the association of audit fees with disclosures regarding internal control effectiveness under section 302 of the Sarbanes Oxley Act 2002. The study utilised year 2003 to 2004 data from 4952 firm-year observations in US. It was found that companies disclosing problems under section 302 pay higher audit fees. Fees are adjusted for risk associated with problem severity, but relative risk adjustment did not change between 2003 and

2004. They also found a significant fee increase for "clean" companies in 2004, although there was no change in regulation for non-accelerated filers in that year. It also emerged that in 2004, Big 4 audit fees were higher for both continuing and new clients and only companies switching away from Big 4 firms experienced a reduction in their audit fees. Ettredge et al. (2007) studied the relationship between higher audit fees and auditor dismissals in the period immediately subsequent to the implementation of SOX. Their study involved 428 companies which announced auditor dismissals from Jan 2004 through to December 2004. It was found that clients paying higher fees were more likely to dismiss their auditors and dismissals were associated with small companies, companies with going concern reports and companies that later reported material weaknesses in their internal control. Dismissing clients, in particular those hiring new non-Big 4 auditors experienced smaller fee increases than non-switching clients in the following year.

The introduction of a new auditing standard could affect the audit pricing decision and some studies have investigated such effects. Doogar et al. (2010) studied the impact of Auditing standard no 5 (AS5) on audit fees as compared to AS2, the old standard. For this purpose, data for the years 2005-2008 were utilised from 3,023 public companies that were Big Four accelerated filer auditees, whose financial and audit fee data were available in the compustat and AuditAnalytics databases. It was found that AS5 audit fees are aligned with auditee fraud risk, but not AS2 audit fees. Relative to AS2 bench mark level, AS5 audit fees are on average lower for all auditees and are lower for lower-fraud-risk auditees but greater for higher-fraud-risk auditees. On the other hand, the adoption of new financial reporting standards could also affect audit pricing. Kim et al. (2012) examined the impact of International Financial Reporting Standards (IFRS) adoption on audit fees. They concluded that generally mandatory IFRS adoption has led to increases in audit fees. They found however that IFRS-related audit fee premiums increase with the increase in audit complexity brought about by IFRS adoption, and decrease with improvements in financial reporting quality arising from IFRS adoption.

Having two auditors auditing the same company might have an impact on the pricing of audit services. Motivated by this, Thinggard and Kiertzner (2008) examined the audit fees paid by listed companies in Copanhagen, where listed companies are required to have two external auditors. Their study used 2002 data on 126 companies in Denmark. The results indicate that having two significant, independent auditors in a competitive environment is likely to reduce total audit fees, albeit only for larger companies, where the payoff from competition might be worthwhile. So, it might be of interest to other countries to consider two auditors as a solution to the auditor independence issue.

Recently more lines of inquiry have been added to the audit pricing literature. For example, an interesting study was carried out by Hay and Knechel (2010) in which they investigated the effect of advertising and solicitation on audit fees as prior research suggests that the auditing crisis could be caused by deregulation, which allows firms to advertise their services and solicit new clients and encourages firms to be more commercial. For this study, data from all public listed companies in New Zealand from 1980 to 2001 were utilised. It was found that advertising is associated with increases in fees while solicitation corresponds to decreasing audit fees. This finding indicates an increase in competition among accounting firms.

As the economic crisis has become a hot global issue, audit pricing researchers have started relating the economic crisis to audit pricing. Following the severe economic crisis that affected the US, Ettredge et al. (2011) investigated audit fee pressure during the period from 2007 to 2009 to assess the impact of fee pressure on audit effort. The sample consisted of 1897 firms in 2006 and 1926 firms in 2008. The study found that 49.6% of clients successfully exerted fee pressure on their auditors. They also found that fee pressure is positively associated with reporting losses, increases in size and complexity and disclosures of material weaknesses in internal control over financial reporting. They concluded that clients that successfully exert fee pressure are more likely to have accounting misstatements and have higher

levels of discretionary accruals in 2008 and these results are driven by smaller auditors.

Another audit pricing issue emerged in an Australian study in terms of audit fee benefits arising from the execution of deed of cross guarantee (DXG), which relieves wholly owned subsidiaries from financial reporting, auditing and other requirements. Using data from 1317 listed companies in Australia for the financial year 2007, the study found positive and persistent statistical significance of the DXG in audit fee determination and established that DXG groups consistently pay higher audit fees than non-DXG groups, irrespective of firm size or audit complexity.

As a conclusion, there has been sound general development of audit pricing studies since Simunic's (1980) seminal paper. Appendix 1 summarises audit-pricing studies since the 1990s. One of the variables identified by previous studies and that has an impact on audit pricing is corporate governance. Hay et al. (2006) and Hay et al. (2012) concluded that more audit pricing and governance studies are needed. The other important variable that appears in most of the previous studies is non-audit fees. As the objective of this research is to assess the impact of corporate governance (including ownership structure) and non-audit fees on audit fees, detailed discussion on the relationship between these two characteristics and audit pricing will be provided later in this chapter.

3.3 Corporate Governance and Audit Pricing Literature

Prior studies (e.g. Shleifer and Vishny, 1997; Dennis and Mc Connel, 2003) has noted that good corporate governance is beneficial to the company. To be effective corporate governance should possess certain characteristics. As internal corporate governance is expected to be interrelated with the monitoring role of the external auditor in monitoring management behavior and safeguarding the shareholders, the characteristics of corporate governance can also be associated with audit pricing.

Hayes et al. (2005) describes four theories that may explain the demand of audit services. The first theory is Policeman theory where an auditor is needed for fraud detection and prevention. Second theory is Lending Credibility theory where audited financial statements are used by management to enhance the stakeholders' faith in management's stewardship. The third theory, Theory of Inspired Confidence explains that audit services is the direct consequence of the participation of outside stakeholders in the company.The last theory, Agency theory point out that a reputable auditor is appointed not only in the interest of the third parties, but also in the interest of management.

Discussion of corporate governance in the context of audit pricing normally involves two different perspectives, the supply and demand sides of audit services. Looking at the demand side of the audit service, good governance could be reflected in a higher demand for good quality audits, which could give rise to higher audit fees. This is highlighted by Hay and Knechel (2004) as they argued that the demand effect may lead to increased audit fees as independent directors may demand more auditing in order to fulfil their responsibilities, protect their reputations and discharge their responsibilities of due diligence. Looking at the supply of the audit service by the auditor, improved corporate governance could reflect a good control environment within a company hence requires a reduced audit, which could then be translated into lower audit fees (Collier and Gregory, 1996). Prior studies suggest that the firm's internal control mechanism has a significant impact on control risk and audit scope as audit fee determinants (e.g. Wallace, 1986). Hence, a weak internal control mechanism results in higher control risk and to reduce audit risk to an acceptable level more substantive audit work will be needed and this results in higher audit fees (Desender et al., 2009). In seeking to review existing evidence, the discussion of prior literature on corporate governance and audit pricing is divided into three main governance issues: board characteristics, audit committee characteristics and ownership structure.

3.3.1 Board Characteristics and Audit Fees

Board Composition and Independence

The relationship between board characteristics and audit fees has begun to attract interest from audit fee researchers (e.g. O'Sullivan, 1999; Peel and Clathworthy, 2001). In the early 2000s, few studies had looked at the issue (e.g. O'Sullivan, 1999; O'Sullivan, 2000; Peel and Clatworthy, 2001; Carcello et al., 2002 and Tsui et al., 2001). More recently, there has been slightly more research interest (e.g. Bliss et al., 2007; Boo and Sharma, 2008; Leventis and Dimitropoulos, 2010). The board characteristic most frequently studied is the composition or independence of board members as successive governance reforms since the 1990s have emphasised the monitoring potential of non-executive board members (e.g. Cadbury, 1992; Hampel, 1998 and Higgs, 2003, Combined Codes, 2000, 2003, 2006, 2008; UK Corporate Governance Code, 2010).

The role of independent outside directors becomes crucial in monitoring the management as Agency theory suggests that boards dominated by inside directors may intentionally provide self-serving accounts of managerial actions to enhance their status with the firm's chief executive officer (Fama 1980; Eisenhardt, 1989). Since outside directors are independent of management they are expected to allow an effective and impartial governance system to operate within the corporation (Abdul Rahman, 2006).

Cadbury (1992), Hampel (1998), and Higgs (2003) and various editions of the Combined Code and the current UK Corporate Governance Code (2012) have all emphasised the importance of non-executive representation on the board of directors as a means of ensuring greater independence and impartiality in board decision-making. Carcello et al. (2002) describe three factors which may motivate independent directors to prevent and detect any opportunistic reporting behaviour by management. First, the directors may seek to protect their reputations as experts in monitoring, because the market for directors punishes those associated with corporate failure or poor performance. Second, from a legal liability perspective,

directors who fail to exercise reasonable care in discharging their monitoring responsibilities are liable to be subject to severe sanctions. Third, shareholders often suffer significant losses in the wake of financial reporting problems, so directors seeking to protect shareholder wealth may seek a higher quality audit service. Past studies found evidence of an inverse relationship between the percentage of outside directors and fraudulent financial reporting (Beasley, 1996; Dechow et al., 1996).

O'Sullivan (1999) examined the impact of board/audit committee characteristics on audit fees paid by large UK companies in the post-Cadbury period. Using comprehensive analysis of financial statements for the year 1995 of a sample of 146 largest non-financial companies quoted on the London International Stock Exchange the study found that board composition variables had no significant impact on the audit fees paid. The study (O'Sullivan, 1999, p 261-262) provides detailed reasons for the insignificant relationship found in the study.

> "First, even though increased non-executive representation and audit committee membership is perceived to result in better governance on behalf of shareholders, such reforms may have a dual impact on audit pricing. While internal governance reforms are expected to signal better internal controls and consequently lower audit fees, the introduction of increased independence is also expected to encourage auditors to increase effort and ultimately fees. Non-executives serving on boards and audit committees may encourage increased testing by auditors so as to minimise the likelihood of future financial problems for the firm and avoid subsequent criticism being directed at them. Of course, the net impact of both these pressures may result in individual mechanisms of governance having a negligible impact on the audit fee. Second, even though we have taken care to conduct our analysis at least three years after the Cadbury (1992) recommendations, it is unclear how long auditors may require firms to have appropriate internal governance mechanisms in place prior to offering an audit fee reduction. A useful extension of our study may be to monitor the relationship between audit fees and internal governance characteristics over a longer period of time.

> Especially useful might be a study of the impact of internal governance changes on the audit fee. Third, since we have undertaken our analysis post-Cadbury, we are unable to investigate the impact of internal governance changes on the audit fee. For example, we do not know whether companies possessing few nonexecutive directors and CEO/chairman duality paid higher audit fees prior to the Cadbury recommendations. Our results may indicate that the widespread adoption of the minimum governance characteristics recommended by Cadbury (1992) serves to eliminate fee reductions that had previously been received by 'better' governed companies. Of course the widespread compliance with the Cadbury (1992) recommendations is expected to reduce the variation in board composition and leadership and consequently reduce the power of the empirical tests. An interesting extension of our study may be to undertake an examination of the relationship between board composition and audit pricing utilizing pre-Cadbury data."

As a result, shortly afterwards, O'Sullivan conducted another study (O'Sullivan, 2000), to investigate the impact of board composition and ownership on audit fees prior to the adoption of the recommendations of the Cadbury report (1992). This time data from a sample of 402 quoted companies in UK was utilised. Contrary to the result post Cadbury (1992), this study found that the proportion of non-executive directors had a significant positive impact on audit fees. This result suggests that non-executive directors encourage more intensive audits as a complement to their own monitoring role. According to O'Sullivan and Diacon (2002), increasing the non-executive representation on the board of directors has the capacity for improving the quality of the audit process in the following three respects:

a. External auditors are able to discuss matters arising from the audit process with non-executive representative board members, free from managerial influence. This is especially important if auditors seek to question certain aspects of the preparation of the financial statements by management or

require further (more costly) testing in order to reach an opinion on the quality of financial statements.

b. In negotiations with the external auditor, non-executives are expected to place greater emphasis on the extent and quality of the audit rather than on the cost, compared to executive directors.

c. Non-executives are expected to favour more extensive auditing in order to complement their own monitoring responsibilities since they share with auditors the objective of identifying and rectifying reporting errors made by managers, deliberately or otherwise.

Peel and Clatworthy also extended post-Cadbury study by investigating the relationship between internal governance structure and audit fees. As an internal governance mechanism, non-executive directors could contribute to higher quality auditing in many ways. Contrary to the findings of O'Sullivan (2000), Peel and Clatworthy (2001) found an insignificant relationship between board composition (measured by percentage of non-executive directors to total directors) and audit fees. The study utilised data on 132 listed UK firms for 1992. They concluded that there is no systematic evidence that auditors (both pre and post-Cadbury) recognise board governance characteristics in pricing their audit. A possible explanation for this difference could be the different sample size used by the two studies; while O'Sullivan based his conclusions on 406 quoted companies, Peel and Clatworthy based theirs on a much smaller sample of 132 companies.

Tsui et al. (2001) examined the relationship between a firm's internal monitoring mechanism and its impact on audit fees in Hong Kong. Using data from 650 non-financial companies in Hong Kong between the years 1994 and 1996, they found that the independence of corporate boards (measured by chief executive officer and chairman being separate individuals) is an important factor in auditors' assessment of control risk and the determination of audit fees.

Leventis and Dimitropoulos (2010) investigated the relationship between audit pricing, quality of earnings and board independence in Greece, utilising data from

248 firm year observations (from 97 companies listed on Athens Stock Exchange) for a five year period (2000-2004). The study found a positive association between board independence and audit pricing (meaning strong governance is related to increased need for quality assurance services). The study also documented a positive association between audit pricing and earnings management for small size companies. The study assumed this to be an indicator of a potential red flag.

Desender et al. (2009) investigated whether the relationship between board characteristics and the demand for external audit was different for firms with dispersed ownership compared to firms with controlled ownership. Using data on 247 French and Spanish listed companies in 2007 the study found that ownership structure has a significant influence on the relationship between the demand for external audit and board characteristics. For widely held-firms, they found that board independence and CEO duality are significantly related to audit fees; however, the relationship between board characteristics and audit fees was found to be insignificant in closely-held firms.

A recent UK study by Zaman et al. (2011) incorporated board composition variables into the audit pricing model. The study recognised that the composition of the board/audit committee is an important factor that may affect audit quality. It was found that proportion of independent non-executive directors has a significant relationship with audit fees when the composite measure of audit committee effectiveness is substituted with the independent variables relating to audit committee effectiveness.

Board Leadership

Another corporate governance issue that has received increasing attention is board leadership. Most studies use CEO duality to reflect board leadership. CEO duality means that the CEO is also chairman of the board of directors: a situation that is common in the US. Coles et al. (2001) found 80% cases of role duality among their sample of US firms. However, CEO duality is not as common in the UK as the US

and has become even less popular recently. Conyon (1994) reported 23% CEO duality in the UK in 1993, whilst O'Sullivan (1999) reported 15% for the year 1995 and Zaman et al. (2011) reported a significant reduction by 2004, with only 3% of their 135 sample firms having the same person occupying these two important positions. The continuous reduction in the CEO duality case is a result of the recommendation of the codes of corporate governance (e.g. UK Corporate Governance Code, 2010). Section A.2.1 of the code highlighted that the roles of chairman and chief executive should not be fulfilled by the same individual and the division of responsibilities between the chairman and chief executive should be clearly established, set out in writing and agreed by the board.

Stewardship theory argues that CEO duality may enhance board effectiveness. Solomon (1993) contended that the firm managers' influence in setting board agendas and the flow of information are stronger when the firm adopts CEO duality. Another study agreed that CEO duality helps in decision-making as it permits a sharper focus on company objectives and also promotes more rapid implementation of operational decisions (Stewart, 1991). In the same vein, Dahya et al. (1996) stated that CEO duality helps the CEO to understand the strategic vision of the firm better due to minimal board interference. Further suppor is given by Rechner and Dalton (1991), who claimed that CEO duality may lead to improvement of the firm's performance as a result of clear unfettered leadership of the board.

However, CEO duality removes the 'checks and balances', hence resulting in a decrease in vigilance regarding the operation of the firm (Abdul Rahman, 2006). CEO duality can be wrongly used for personal gain due to greed and corruption at the expense of other stakeholders in the firm. The case of Enron is a real-life example of this situation, where Kenneth Lay was both the CEO and Chairman until 2001. Therefore, separation of these two positions provides the essential 'checks and balances' needed to improve accountability ad transparency of the board. It is also argued that CEO duality upsets the balance of power among the top management team. In other words, CEO duality restricts the board's effectiveness in controlling managerial initiatives and in decision-making since duality is assumed

to increase information asymmetry between the CEO and the board (Boyd et al., 2005, Desender et al., 2009). Fosberg and Nelson (1999) state that firms with separated, clear-cut leadership perform significantly better in the areas of strategy formulation and implementation. This is supported by Farber (2005), who found that fraud firms have a higher percentage of duality, which makes it difficult for insecure directors to be honest when evaluating firm performance, thereby leading to long term organisational drift (Carver, 2006).

Bliss (2011) examined whether CEO duality affects the association between board independence and demand for higher quality audits proxied by audit fee. Using data from 950 Australian public listed companies in 2003 the study found that the positive association between board independence and audit fee proxied for audit quality is only present in firms without CEO duality. He suggested that CEO duality constrains board independence. The finding is supported by a study in Europe (Desender et al., 2009). Partitioning their sample size into widely-held firms and closely-held firms, Desender et al. (2009), who utilised data on 247 French and Spanish listed companies in 2007, found that CEO duality is a significant determinant of audit fee only in widely-held firms. In the presence of a dominant CEO, non-executive directors are expected to have reduced influence in seeking an intensive audit (Desender et al., 2009) and as a result companies with CEO duality are more likely to have lower demand for external audit services (O'Sullivan, 2000), hence audit fees will be lower. On the other hand, most of the earlier UK studies, for example, O'Sullivan (1999), Peel and Clatworthy (2001) and O'Sullivan (2000), failed to find any significant relationship between CEO-duality and audit fees. Contrary to the other UK studies Zaman et al. (2011) documented a significant positive relationship between CEO duality and audit fees when using CEO duality as one of their control variables to assess the relationship between audit committee effectiveness and audit fees.

Board Size

The effect of board size on the monitoring ability of the board of directors has also been discussed. Some researchers have argued that larger boards have greater capability to monitor the actions of top management as it is difficult for CEOs to dominate larger boards (Zahra and Pearce, 1989). Supporting this view, Singh and Harianto (1989) argued that larger boards can make it difficult for the CEO to obtain consensus for taking actions that will harm shareholders' interests. However, there are disadvantages associated with larger boards. Prior studies have identified that larger board size is associated with decreased board ability to control management, difficult communication among directors, poorer decision making and poorer processing of information (Vafeas, 1999). In addition, larger boards increase the time taken to make decisions and bureaucratic problems create more hindrance (Xie et al., 2003). In addition, Jensen (1993) argued that large boards are less effective in their oversight duties relative to smaller board and are susceptible to CEO domination over board matters. Jensen (1993, p. 865) states that: 'as groups increase in size they become less effective because the coordination and process problems overwhelm the advantages from having more people to draw on'.

In contrast, it is suggested that smaller boards may be more effective as they might be more able to make timely strategic decisions (Goodstein et al., 1994). In addition, Fieger and Brown (2000), for example, found that smaller board size and outside representation is conducive to an active board with high level of involvement in strategic formulation. Other studies found that smaller board size, particularly amongst large US industrial corporations, is associated with better firm performance (Yermack, 1996).

In conclusion, regarding optimum board size, the board should not be so big that its ability to control management is reduced and communication among directors is difficult, leading to poorer decision making and poorer processing of information, and should not be so small that it can be easily dominated by the CEO.

Many changes have occurred in terms of board composition in UK listed companies post the Cadbury Report. Dahya et al. (2002), in a study involving a sample of 460 UK publicly quoted companies, documented the increase in non-executive directors on UK boards, indicating that the percentage rose from 35.3% pre Cadbury to 46% post Cadbury Report. Faccio and Lasfer (1999) reported that the median board size of UK companies is 7, while Renneboog and Trojanwoski (2005) reported a median board size of 9.

The association of board size and audit fees has been investigated in the US (Boo and Sharma, 2008; Chan et al., 2012). Boo and Sharma (2008) examined the relationship between internal governance characteristics, external audit monitoring proxied by audit fees and regulatory oversight, using 2001 data from 469 large listed companies comprising 252 finance companies and 217 companies from non-regulated industries. Their studies were motivated by the call by DeFond and Francis (2005) to develop theoretical explanations regarding how and why the board and audit committee influence the financial reporting and audit processes. Cohen et al. (2004) and DeFond and Francis (2005) examined how industry regulation influences corporate governance practices. The coefficient value of variables measuring board/audit committee size is insignificant in their model 2; however, after introducing an interaction term for board size and regulated companies, the coefficient of the interaction term *SIZE–REG* (board/audit committee size by regulatory oversight) is negative and significant ($p < 0.01$). This result is also consistent with their expectation from their Hypothesis 3, which posits that regulatory oversight diminishes the association between size of board/audit committee and audit fees. As a whole the study concluded that the association between audit fees and board/audit committee independence and size is weaker for regulated companies.

In an attempt to examine whether independent audit committee members' board tenure affects audit fees, Chan et al. (2012) included both board size and audit committee size among their controlling variables. Utilising data from1524 firm-year observations of US firms for the years 2005 and 2006 the study found that board

independence and board size are positively associated with audit fees. These findings suggest that high-quality boards demand more audit effort from external auditors.

Board Activity or Board Dilligence

The UK Corporate Governance Code (2012, Section A.1.1) highlights the importance of board meetings. It is clearly stated that the board should meet sufficiently regularly to discharge its duties effectively. There should be a formal schedule of matters specifically reserved for its decision. This is important as meeting frequency could reflect board effectiveness as boards that meet frequently are likely to be better informed and more diligent in performing their duties (Goodwin-Stewart and Kent, 2006). This fact is supported by earlier researchers, such as Conger et al. (1998) and Lipton and Lorsch (1992). In the same vein, Evans and Weir (1995) concluded that a board of directors that has frequent meetings has more time to identify and discuss problems and this is expected to lead to superior performance of the company. Another study correlated board meeting frequency with annual report timeliness (Tauringana et al., 2008) in Kenya. The study found a significant negative relationship between frequency of board meetings and timeliness of the annual report, indicating that companies which hold meetings frequently publish their annual reports earlier, thereby enhancing the company's performance and providing evidence of an effective corporate governance mechanism. Despite the fact that number of board meetings is important in measuring board effectiveness, not many audit fee researchers have included this variable in their audit pricing model.

Among the researchers who have considered board activity or diligence in an audit pricing study are Carcello et al. (2002). Carcello et al. (2002) used number of board meetings held to measure the diligence of the board, since the behaviour of individual board members surrounding such meetings, which includes preparation before meetings, attentiveness and participation during meetings, and post-meeting follow-up, is not observable by the public. Based on an analysis of 258 companies

from Fortune 1000 in the US in the year 1992 to 1993, Carcello et al. (2002) confirmed that high frequency of board meetings could indicate a higher level of control in the company, leading to higher audit fees.

In UK, Zaman et al. (2011) used number of board meetings to control for board effectiveness in their audit pricing model. Utilising panel data (2001-2004) of a sample from 135 FTSE-350 the study found a significant positive relationship between audit fees and number of board meetings per year.

3.3.2 Audit Committee Characteristics and Audit Fees

Unlike board characteristics, which have received comparatively little attention from audit pricing researchers, audit committee characteristics is a well researched area.In the 1990s, researchers started investigating the relationship between the existence of an audit committee and audit fees. Collier and Gregory (1996) investigated this relationship to establish whether audit committees are effective in ensuring audit quality by protecting the auditors from fee cuts which might affect audit quality. For this purpose, data from 315 FTSE UK companies from the year 1989 to 1991 was utilised. The study found evidence that the relationship between size-related audit fees and presence of an audit committee is positive and significant. O'Sullivan and Diacon (2002) compared the pricing of audits in mutual and proprietary insurance companies. Utilising data from 117 UK insurance companies in 1992 they found that the existence of an audit committee has a positive impact on audit fees paid by companies. Redmayne et al. (2011) examined the association between the existence of an audit committee and audit fees in New Zealand public sector entities for the period 1998–2000, when audit committee formation was voluntary. The study found enough evidence to associate audit committees with lower audit fees and interaction with audit risk in public-benefit entities but found a positive association between audit committees and audit fees (but no significant interaction terms) in profit-oriented public sector entities.

O'Sullivan (1999) extended the research area to include audit committee characteristics in his audit pricing model. The study includes two variables for audit

committee characteristics: audit committee size and audit committee independence, measured respectively by number of members on the audit committee and a binary variable to represent the existence of executive directors on audit committee. The study, however, failed to find any evidence of a relationship between audit committee characteristics and audit fees. In the US, Boo and Sharma (2008) examined the relationship between audit committee independence and audit committee size for regulated and non-regulated companies. The study found the association between audit fees and audit committee independence and size to be weaker for regulated companies.

Besides studying the impact of board characteristics, Carcello et al. (2002) also investigated the relationship between audit committee independence, diligence and expertise and audit fees. The researchers simply replaced their measures of board independence, diligence and expertise with comparable audit committee measures. The study found enough evidence to conclude that audit fee has a positive relationship with audit committee independence and audit committee expertise diligence but not with number of audit committee meetings. The study also combined both types of variables in one audit pricing model and found that all board variables remained significant, while none of the audit committee variables were significantly related to audit fees. They concluded that audit committee variables provide no incremental explanatory power when board variables are included in the model.

Abbott et al. (2003) examined the association between audit committee characteristics and audit fees, using US data for 2001. Their study included three audit committee variables: audit committee independence, audit committee expertise and audit committee meeting frequency. They found that audit fees are higher when firms have an independent audit committee. A similar result was found for firms with at least one accounting or financial expert on the audit committee as opposed to firms without accounting or financial experts on the audit committee. Their result indicated that directors' independence and their competence can both increase audit scope. This is because audit committee members with accounting

experience are more likely to understand the importance of external auditing and make judgments consistent with those that an auditor would make. This argument is supported by Knapp (1987), who suggests that auditors are more likely to discuss accounting issues with knowledgeable audit committees. Therefore, audit committees' accounting or financial expertise can induce audit effort. In addition, audit committee expertise could enhance and maintain the relationship with the auditor. Lee at al. (2004) found that the financial expertise of audit committee members is inversely related to auditor resignation. Krishnan and Visvanathan (2009) also examined the relationship between audit fees and audit committee financial expertise. The study partitions the financial expertise into accounting financial expertise and non-accounting financial expertise. The study utilised data of 801 firm-year observations (2000-2002) of S&P 500 US companies other than financial institutions and companies not audited by Big 4 audit firms. The study found that audit fee is negatively related to accounting financial expertise but not to non-accounting financial expertise.

Some audit pricing studies have used a composite measure of audit committee effectiveness. Lee and Mande (2005), for example, examined the relationship between audit committee characteristics and audit fees using a composite measure of audit committee effectiveness (to be considered effective an audit committee must be fully independent and meet at least four times a year). The composite proxy captures the interaction between independence and diligence and potentially could provide greater explanatory power than the individual component attributes. The study also included audit committee expertise (financial expertise) in the audit pricing model. Using a sample of US firms listed on New York Stock Exchange in 2000, the study found that audit fees are positively related to audit committee independence and diligence.

Vafeas and Waegelein (2007) investigated the effect of board and audit committee characteristics on audit fees. Using data on US Fortune 500 companies for 2001–2003 the study documented positive associations between audit fees and board independence, size and activity and also audit committee independence, expertise

and size. Likewise, Goodwin-Stewart and Kent (2006) examined the association between board and audit committee characteristics and audit fees, based on Australian data in 2000. They found that audit fees are positively related to board independence and audit committee diligence. Rainsbury et al. (2009) examined the association between the qualities of audit committees and external audit fees in an environment where the formation of audit committees was unregulated. Utilising data on 87 companies listed on the New Zealand Stock Exchange in 2001 the study found that the quality of the audit committee (audit committee independence and expertise) has little impact on the level of fees paid to external auditors. The result suggests that the benefits of "Best practice" audit committees may be less than anticipated by regulators and policy makers.

Motivated by gender differences in human behaviour, and recent findings in corporate finance literature, Ittonen et al. (2008) examined the association between female audit committee representation and audit fees among S&P firms listed on the major US Stock Exchange. Using 2006 data on these companies the study found that firms with female audit committee representation have significantly lower audit fees.Their study is considered novel in the sense that it was the first study to introduce gender diversity into corporate governance and audit pricing studies. A few years after this study, the regulators started to recogniseg the importance of board diversity, including gender diversity, to effectiveness of boards and audit committees (see UK Corporate Governance Code, 2012).

Prior to SOX, the audit committee's responsibility regarding the audit and the preparation of the financial statements was to act in an advisory role to management and to the external auditor. Following the enactment of SOX(2002), the structure of the audit committee changed and its role and responsibility for oversight of the external auditor were expanded. Hoitash and Hoitash (2009) extended previous research by examining the association between audit committee characteristics and auditor related decisions following the mandated changes in the committee's composition and responsibilities. The study examined the association between audit committee characteristics and auditors' compensation and dismissals following the

enactment of SOX. Using data from a 2004 sample of 2393 companies with a total of 8306 audit committee members, the study found that audit committee size and diligence are associated with higher audit fees. The study also documented a positive association between level of assurance and proportion of experts on the audit committee. Inconsistent with previous studies, this study found that experts with supervisory expertise demand higher quality audits. They conjectured that the lack of actual experience among those with supervisory expertise might cause them to purchase additional audit services. Alternatively, familiarity of accounting financial experts with the audit negotiation process enables them to negotiate a high level of assurance at a lower cost. However, when examining engagements that follow dismissals, their evidence is consistent with the prior literature finding that experts with accounting experience seek to hire high quality auditors while those with supervisory experience are more willing to appoint lower quality auditors.

Eagel et al. (2010) examined the relation between audit committee compensation and the demand for monitoring of the financial reporting process in the US. Data from 3295 firm-year observations covering the period between 2000-2004, excluding utilities and financial institutions, were utilised for this study. The study documented a positive correlation between total compensation and cash retainers paid to audit committees and audit fees and also the impact of the Sarbanes-Oxley Act, suggesting a positive link between audit committee compensation and the audit committee's demand for financial reporting process monitoring.

Masli et al.'s (2010) examination of the potential benefits of Internal Control Monitoring Technology was an innovative contribution to audit pricing literature. Using i-Data from 139 firm year observations of firms announcing SOX-related ICM technology initiatives over a four-year period (2003-2006) in the US, the study found implementation of internal control monitoring technology to be associated with lower likelihood of material weaknesses, smaller increases in audit fees and smaller increases in audit delays during the post-SOX time period.

Gul and Goodwin (2010) examined whether a firm's short-term debt maturity structure is associated with auditor assessment of audit risk and consequently audit fees. Data were derived from 9,632 firm year observations from 2003 to 2006, excluding financial companies. The study found that short-term debt is negatively related to audit fees for firms rated by Standard & Poor's. This is consistent with the finding of more monitoring and better governance mechanisms in firms with higher short-term debt. Additionally the study found that credit rating quality is negatively related to audit fees, consistent with credit rating quality reflecting a firm's liquidity risk, governance mechanisms, and monitoring from rating agencies. The study also documented that the negative relationship between short-term debt and audit fees is stronger for firms with low-quality credit ratings.

Chan et al. (2012) examined whether long board tenure among independent audit committee members affects audit fees. He examined 1524 year observations of US firms for the year 2005 to 2006. The study argues that there are two possible relationships between board tenure and audit fees. On the one hand, long board tenure audit committee members (defined as members with board tenure of 10 or more years) have greater incentive to protect their reputational capital by purchasing increased audit effort, which positively affects audit fees. On the other hand, audit pricing reflects audit committee quality. Long board tenure audit committee members may have less need for increased audit effort because they can effectively oversee the financial reporting process themselves, which negatively affects audit fees. The study documented a negative association between proportion of long board tenure of directors on the independent audit committee and audit fees.The result of the study is consistent with the notion that long board tenure among audit committee members results in lower audit efforts.

3.3.3 Ownership Structure and Audit Fees

Prior studies argued that there are two types of ownership and control structure: 'outsider' and 'insider' systems (Frank and Mayer, 1995; Short et al., 1998). The classic 'outsider' systems are commonly found in the UK and US. The main

characteristic of this 'outsider' system is dispersed ownership of corporate equity amongst a large number of outside investors whereby the firms are controlled by the managers but owned by outside shareholders (corporate or individual shareholders). As the capital market works based on supply and demand, the shareholders control or discipline the action of the managers by selling their share ownership, causing the share price to go down. In this way, hostile takeovers might take place and most often there will be a change of management. The 'insider' system, on the other hand, is owned and controlled by identifiable and cohesive groups of 'insiders' who have longer-term stable relationships with the company. Included in this system is insider ownership whereby some of the company's shares are owned by members of the board, the CEO or top management.

Publicly traded firms in most countries are generally controlled by single and large shareholders (La Porta et al., 1999). The controlling shareholder should have sufficient financial incentive to reduce his/her willingness to expropriate the wealth of outside investors and this relates to the amount of cash flow rights owned. The greater the concentration of cash flow rights (ownership) in the hand of largest blockholder, the greater his/her incentive to properly run the business (Abdul Rahman, 2006). However, concentrated ownership could cause a conflict of interest between majority and minority shareholders where expropriation of minority wealth by the controlling shareholders could happen.

Previous empirical studies have documented mixed results on the relationship between ownership structure and firm performance. Using data on 114 NYSE or AMEX-listed Corporations in which the majority shareholder owned at least 50.5% of the common stock, Holderness and Sheedan (1988) found that shareholding of large investors has positive relationship with firm performance. In the same vein, McConnell and Servales (1990) also documented a significant positive correlation between fraction of shares owned by large investors and firm performance in their sample of 1000 firms. The result implies that large shareholders may influence the company's policies and may put pressure on companies to perform well. In addition, they also might develop close relationships with directors of the

companies to make the directors more accountable on the performance of the company. Similarly, examining 1301 publicly traded corporations in eight East Asian countries, Claessens et al. (2002) found a significant positive relationship between ownership concentration and corporate performance, especially in countries with weaker governance. Therefore the study concluded that ownership structure plays an important role in structuring corporate governance mechanisms in those countries.

In contrast, studying 511 large US corporations, Demsetz and Lehn (1985) failed to find a significant correlation between ownership concentration and firm performance. The study deduced that concentrated ownership is endogenously determined by a set of firm-level characteristics in the contracting environment. Ownership structure is expected to affect agency costs or risk of organisation or its auditor. Some forms of ownership structure are considered to increase the auditor's potential exposure to liability and thus increase audit fees. The three measurements most commonly used in early studies investigating the relationship between ownership structure and audit fees are dummy variables distinguishing between public versus private companies, stock versus mutual companies and the existence of a major external shareholder. The variable with the strongest impact on audit fees is that which distinguishes between public versus private companies (Hay et al., 2006). In their study, Hay et al. (2006) found that out of 12 studies using this measurement, 8 showed a significant positive relationship with audit fees. On the other hand, the existence of a major shareholder for a public company may indicate lower agency costs or stronger control (Desender et al., 2009; Villalonga and Amit, 2006; Hay et al., 2006), with conflicting effects on audit fees.

In the US, Mitra et al. (2007) examined the empirical relationship between ownership characteristics and audit fees. They performed their analysis based on the stockholder monitoring argument and proposed that large and sophisticated shareholders actively monitor and influence management's accounting policy choice and its strategy for producing financial statement information. They argued that managers' incentive to produce the type of accounting information and the

quality of such information depends on the level of their ownership interests in a firm. The study considers the effect of both supply and demand factors as there is possibly a conflicting relationship between ownership characteristics and audit fees. Based on the supply perspective the study argues that large and sophisticated shareholders normally actively monitor management and constrain its accounting flexibility to produce distorted financial statement information for self-serving interests. Therefore the adverse effect of agency problems and inherent risk of material misstatements in financial reporting diminish. For such a client, the auditor's assessed audit risk becomes lower, leading to lower engagement efforts and/or ex-ante risk premiums and therefore audit fees. In addition, high ownership interests (i.e., greater alignment of manager-shareholder interests in a firm) induce managers to produce more value-relevant information rather than to opportunistically manage accounting numbers for self-serving interests. This has the effect of diminishing the inherent risk of material misstatements and therefore the overall audit risk and audit fees. On the other hand, the relationship between ownership structure and audit fees is likely to hold from the demand perspective as well. On one hand, large, sophisticated shareholders as a part of their monitoring may require firm managers to purchase high-quality audits as a safeguard against fraudulent financial reporting. On the other hand, managers may purchase a high-quality audit service to increase the perceived credibility of reported financial information in an effort to attract investments from large and sophisticated shareholders. Furthermore, when their ownership interests are high, managers may be inclined to purchase high-quality and extensive audit coverage to create a positive perception about the reported financial numbers in order to derive various economic benefits. Based on these arguments the study concluded that audit fees are jointly determined by both the demand-related and supply-related factors. To find the answer to the question of which factor dominates the relationship between ownership structure and audit fees, they examined whether stock ownership by sophisticated and substantial shareholders and managerial personnel has a relationship with audit fees. For this purpose, four ownership constructs were used;

a. Diffused institutional stock ownership (i.e., aggregate percentage ownership

by institutions who individually own less than 5% of the outstanding common stock),

b. Institutional blockholder stock ownership (i.e., aggregate percentage ownership by institutions who individually own 5% or more of the outstanding common stock),
c. Non-institutional blockholder stock ownership (i.e., aggregate percentage ownership by non-institutional shareholders who individually own 5% or more of the outstanding common stock), and
d. Percentage of stock ownership by managerial personnel.

Using a sample of 358 New York Stock Exchange (NYSE)-listed, non-regulated industrial firms that were audited by Big Five audit firms and had a fiscal year end on December 31, 2000, the study found that diffused institutional stock ownership is significantly and positively related to audit fees as a result of institutional investors' demand for the purchase of high-quality audit service as a safeguard against fraudulent financial reporting or firms' endeavour to purchase high-quality audits to attract institutional investment in common stock. Consistent with the notion that large and substantial shareholder monitoring reduces the inherent risk of material misstatements and audit risk, they found that institutional blockholder stock ownership is negatively related to audit fees. In addition, Mitra et al. (2007) documented that managerial stock ownership is negatively related to audit fees. The study suggests that managers with high ownership interests are less likely to engage in opportunistic reporting activities, reducing the inherent risk of misstatements in the financial reporting process. As a result, the auditor perceives a low level of audit risk, leading to a lower price premium and/or audit engagement efforts and therefore lower audit fees. The study did not find any evidence that non-institutional blockholder stock ownership affects audit fees. The main results of the study hold even when the effects of board-related and audit committee variables are factored into the analysis.

In Europe, Desender et al. (2009) investigated how the ownership structure and the board of directors affect the demand for external audit. This study is interesting

because despite the existence of integration of financial markets, corporate financing and governance practices in Continental European countries like France or Spain are very different from practices in the US or UK. The study listed a few differences between Continental Europe and the Anglo-American system. First, the role of market forces in monitoring managers' behaviour is weaker in France and Spain than in Anglo-American countries. Second, the contribution of financial markets in corporate financing is lower where external monitoring mechanisms such as takeovers, the market for managers and nonexecutive directors, remain marginal in the corporate governance process. Third, the French and Spanish environments are rather characterised by entrepreneurship culture and high managerial power: most public companies exhibit concentrated ownership and are controlled by large shareholders who directly monitor managers' actions and the accounting production process as they generally dominate the board of directors. The study claimed that using French and Spanish firms allowed them to investigate the demand for audit by the board of directors in the context of a non-Anglo-Saxon institutional environment where firms are much more concentrated. In addition, focusing on companies from countries with a low litigation risk setting allowed them to investigate the importance of the director's legal liability on the demand for audit. Referring to other prior literature like Zahra and Pearce (1989) and Hillman and Dalziel (2003), which described the two main functions of the Board of Directors as monitoring and providing resources (e.g. legitimacy, advice and counsel, links to other organisations, etc.), the study argued that:

a. The ownership structure directly influences the priorities set by the board of directors,
b. The demand for audit by the board of directors depends on the board's primary focus.

The study explained that the monitoring role of the board is most important in dispersed ownership companies as there is a great need to use the board of directors to monitor the managers. In contrast, when ownership is concentrated, large shareholders, who are already motivated to monitor management, have a lot of influence beyond the board, more access to valuable information and have

alternative corporate governance mechanisms to discipline the managers if necessary. Therefore, those boards with a strong focus on monitoring are more likely to favour a higher demand of audit compared to boards with a focus on providing resources to management. Based on 2007 data from 247 French and Spanish listed companies the study found that the ownership structure has a significant influence on the relationship between the demand for audit and board characteristics. Similar to the findings for Anglo-American companies the study found that board independence and CEO duality (i.e. the CEO also serves as Chairman of the Board) are significantly related to audit fees for firms with dispersed ownership. However, for closely held firms, the study did not find any significant relationship between board characteristics and the demand for external audit. The result of the study implies that a firm's ownership structure has an important influence on the behaviour of the board of directors.

In the UK, the relationship between ownership structures and audit quality was investigated by O'Sullivan (2000) using data prior to the adoption of the Cadbury Report (1992). His study was motivated by Chan et al. (1993), who suggest that shareholders in companies with widely dispersed ownership are expected to place particular reliance on auditing as a means of monitoring managerial behaviour. The study argues that as ownership becomes more dispersed, direct monitoring by shareholders becomes more costly and greater reliance on the audit as a mechanism of governance is expected. In a more concentrated ownership, block shareholders possess a greater incentive to actively monitor managerial behaviour due to the size of their equity holdings and the likely cost to them of any non-value-maximising behaviour by managers. Such shareholders are expected to view the audit process as an important mechanism through which they can monitor managerial behaviour. Based on these arguments, the study expected higher audit fees both in companies with widely dispersed ownership (due to the appropriateness of auditor monitoring compared to other monitoring mechanisms and the bonding motivation of managers), and also in companies with large external blockholders (due to such blockholders having the financial incentives to ensure maximum monitoring is undertaken).

O'Sullivan (2000) also examined the impact of management share ownership on audit fees. The study refers to the argument of Jensen and Meckling (1976) that agency conflicts between managers and shareholders may be reconciled when managers possess an ownership interest in their companies. Managerial ownership serves to realign the interests of shareholders and managers, therefore reducing the need for intensive auditing. Furthermore, a significant portion of equity shareholding could reduce incentive for the management to issue misleading information to shareholders, so auditors are less likely to need to undertake additional testing. This suggests that the extent of auditing and ultimately the audit fee will be negatively related to the degree of managerial ownership, but at higher ownership levels, auditing is expected to be more intensive, reflecting the increased likelihood of managerial entrenchment. Based on data of 402 quoted UK companies in 1992, the study found enough evidence to argue that audit fees are negatively related to the proportion of equity owned by executive directors. However, the study failed to document any evidence that large blockholder ownership (partitioned into % ownership by institutional investors and % ownership by non-institutional investors) has significant impact on audit fees.

While previous studies in the UK (e.g. O'Sullivan, 2000) used proportion of total equity owned by institutional investors and proportion of total equity own by non-institutional investors to measure block ownership, Adelopo et al. (2012) examined the impact of ownership structure on audit pricing using number of Multiple Large Shareholders (MLS-the number of large shareholders holding at least 3 percent of the total voting shares in a company). The study used the number of MLS to define ownership concentration in a firm and to categorise firms in their sample. It is indicated in Adelopo et al. (2012) that they use MLS to respond to the open call in Edmans and Manso (2009) to use MLS since the number of MLS matters in corporate monitoring as it is a relevant determinant of market efficiency or strength of corporate governance. The study is also an extension of Mitra et al.'s (2007) direct examination of the relationship between ownership structure as a part of corporate governance and the level of audit fees. The study partitioned the sample into three categories with equal ranges, i.e. firms where MLS $\leq$4 (diffused firms),

5≤MLS≤8 (concentrated firms) 9≤MLS≤12 (highly concentrated firms). The study found significant differences between audit fees, company size and committee meetings for each of these three groups using one-way analysis of variance (ANOVA). The study also investigated the relationship between the number of MLS, Audit committee activity and audit fees in a multiple regression model that controlled for additional variables including firm-specific and governance variables. Hypothetically, they expect that when a firm has more MLS (concentrated firms), monitoring by active shareholders and monitoring by block-holders will increase, and this will most likely impact positively on internal control and mitigate misreporting. This is because the improvements in internal control should reduce audit risk, hence reducing audit fees. Their findings are consistent with this conjecture. Specifically, the study found that the number of MLS is significantly and negatively related to audit fees. This suggests that the higher the number of MLS, the higher the ownership concentration and the lower the audit fees paid to the external auditors. Table 3.1 summarises prior audit pricing and corporate governance studies since the 1990s.

In conclusion, literature review on corporate governance and audit pricing in the UK shows that most studies have been done using 1990s data, around the Cadbury period. Since then, corporate governance in the UK has gone through rapid development especially with regards to board and audit committee effectiveness. Higgs Report (2003), Smith Report (2003) and consequently Combine Code (2003), have brought many changes to the corporate governance especially with regard to audit committee effectiveness. Therefore, this study aims to fulfil this gap. In the interim, the study contributes to the literature by examining the relationship between governance and audit pricing using more comprehensive characteristics including board characteristics, audit committee characteristics and ownership structure. In addition, the more comprehensive measurements of the characteristics are employed. There are two studies that use data in 2000s (Zaman et al., 2011; Adelopo et al., 2012). However, Adelopo et al. (2012) only focus on the impact of Multiple Large Shareholders and audit committee activity on audit fees. The quite similar study is done by Zaman et al. (2011). They have investigated the

relationship between governance characteristics and audit fees using a more recent data (2001-2004 UK-data). However, this study is different from Zaman et al. (2011) in a few ways. Firstly, this study consist more comprehensive governance characteristics including board characteristics, audit committee characteristics and ownership structure while Zaman et al. (2011) focus more on audit committee effectiveness and audit pricing. Secondly, Zaman et al. (2011) covers the period before and around Smith Report (2003), therefore the study cannot actually capture the effect of recommendation of Smith Report (2003). On the other hand, this study use data in 2007 and 2010 which capture the impact of the recommendation (Smith Report, 2003) on audit pricing. Thirdly, Zaman et al. (2011) use a very small sample size (135 FTSE 350 companies) to arrive at their conclusion while this study utilises data of 384 FTSE All Shares listed companies.Therefore, the conclusion from this study also covers the smaller companies listed on FTSE Small Capital which are ignored in earlier studies. Fourth, this study contributes to the literature since Financial Institutions which are ignored in Zaman et al. (2011) and the previous. The collapse of the UK Banking Institutions justifies the inclusion of this industry in the study. In addition, this study also investigates the impact of economic condition on the relationship between governance characteristics and audit fees by having a comparison between pre- and post-economic crisis on the relationship between governance characteristics and audit fees.

Table 3.1: Summary of Empirical Studies Examining the Influence of Corporate Governance Characteristics on Audit Fees

Author(s) ***(Publication)***	**Objective(s) of study**	**Details of study(Country)**	**Main Findings**
Collier and Gregory (1996) *(EAR)*	Seek to establish whether audit committees are effective in ensuring audit quality by protecting the auditors from fee cuts which might affect audit quality	1989-1991 data from 315 FTSE companies *(UK)*	• The relationship between size-related audit fees and the presence of an audit committee is positive and significant. • Insignificant negative relationship between risk-and complexity-related audit fees and the presence of an audit committee.
O'Sullivan (1999) *(EAR)*	Examines the impact of board and audit committee characteristics on the audit fee paid by large UK companies in the post –Cadbury (1992) period.	146 large UK listed companies at the end of the 1995 financial year *(UK)*	• Results suggest that audit fees remain predominantly influenced by the size, complexity and risk of the audit client. • Companies operating in regulated industries pay lower audit fees. • No evidence that board and audit committee characteristics influence auditors' pricing decisions • Any fee reductions expected due to improved board monitoring may be counterbalanced by the increase in audit effort and assurances desired by non-executive directors
O'Sullivan (2000) *(BAR)*	Examines the impact of board composition and ownership structure on audit quality in the UK prior to the adoption of Cadbury (1992)	1992 data from 402 quoted companies *(UK)*	• The proportion of non-executive directors has a significant positive impact on audit fees • Audit fees are negatively related to the proportion of equity owned by executive directors • No evidence that ownership by large blockholders or CEO/chairman duality has a significant impact on audit fees.
Peel and Clatworthy (2001) *(CGIR)*	To present the results of a pre-Cadbury study of the impact of board composition variables on audit pricing	1992 data from 132 listed firms, which were the first companies required to disclose consultancy fees under a change to UK disclosure requirements *(UK)*	• It was found that, consistent with a post-Cadbury study of UK quoted firms (O'Sullivan, 1999), a range of board composition variables were insignificantly related to audit fees • Higher consultancy fees were found to be associated with higher audit fees. • While prior research has shown that the aggregated level of institutional and managerial ownership is negatively associated with audit fees, the study finds only directors' ownership has a significant impact.

Author(s) *(Publication)*	Objective(s) of study	Details of study(Country)	Main Findings
Felix et al. (2001) *(JAR)*	This study investigates the effect of internal audit contribution on the external audit fee.	Based on publicly available data and survey responses from internal and external auditors affiliated with 70 Non-financial service Fortune 1000 companies, undertaken in 1997 *(USA)*	• Internal audit contribution is a significant determinant of the external audit fee. • Examination of the factors influencing internal audit contribution suggests that internal audit contribution is influenced by internal audit quality. • As inherent risk increases, the effect of internal audit availability on contribution diminishes, while the effect of coordination on contribution increases. • Overall, the findings suggest that internal audit contribution can result in reduced external audit fees, and that client firms can potentially affect internal audit contribution by investing in internal audit quality, managing availability, and facilitating coordination between the internal and external auditors.
Tsui et al. (2001) *(JAAF)*	The study examines the relationship between a firm's internal monitoring mechanism and its impact on the audit fee.	650 non-financial companies in Hong Kong between 1994-1996 *(Hong Kong)*	• Independence of corporate boards (chief executive officer and chairman being separate individuals) is an important factor in auditors' assessment of control risk and the determination of audit fees. • The negative association between audit fees and independent corporate boards is stronger (weaker) for firms with low (high) growth opportunities.
Carcello, et al. (2002) *(CAR)*	Examines the relationship between three board characteristics (independence, diligence and expertise) and Big 6 audit fees	Data from 258 companies from Fortune 1000 companies in 1992-93 *(USA)*	• Significant positive relationship between audit fees and board independence, diligence and expertise.
O'Sullivan, and Diacon (2002) *(IJA)*	Compare the pricing of audits in mutual and proprietary insurance companies (including audit committees and non-audit fees)	1992 data from 117 UK insurance companies *(UK)*	• Mutual insurers pay significantly lower audit fees compared to their proprietary counterparts • Existence of an audit committee has a positive impact on audit fees paid by companies. • Audit fees are not sensitive to the composition of audit committees. • There is weak evidence of the relationship between provision of non-audit service and audit fees. No evidence linking audit fees and nature of non-audit service. Company size and complexity are the most important determinants of audit pricing in insurance companies, with significant price reductions earned by insurers specializing in either general or life insurance business.

Author(s) *(Publication)*	Objective(s) of study	Details of study(Country)	Main Findings
Larcker and Richardson (2004a) *(JAR)*	To examine the relationship between the fees paid to audit firms for audit and non-audit services and the behavior of accounting accruals.	2000-2001 data from 5,815 firm-years *(USA)*	• The ratio of non-audit fees to total fees has a positive relation with the absolute value of accruals • Using latent class mixture models to identify clusters of firms with a homogenous regression structure reveals that the positive association only occurs for about 8.5% of the sample • Find consistent evidence of a *negative* relation between the level of fees (both audit and non-audit) paid to auditors and accruals (i.e., higher fees are associated with smaller accruals) • The latent class analysis also indicates that this negative relation is strongest for client firms with weak governance
Abbott et al. (2003b) *(CAR)*	Examine the association between audit committee characteristics and the ratio of non-audit service(NAS) fees to audit fees	538 companies filing proxies with SEC between Feb 5, 2001 and June 30 2001 (excluding mutual funds and other financial registrants) *(USA)*	• Audit committees comprised solely of independent directors meeting at least four times annually have significant negative association with the NAS fee ratio.
Abbott et al. (2003a) *(AJPT)*	Examine the association between certain audit committee characteristics and audit fees.	2001 data from 492 non-regulated, Big 5-audited firms that filed annual proxy statements with the SEC between February 5, 2001 and June 30, 2001 *(USA)*	• Audit committee independence (defined as committees comprised solely of independent directors) and expertise (defined as committees that include at least one director with financial expertise per BRC recommendations) are significantly, positively associated with audit fees. • Meeting frequency (a threshold of four meetings per year) was not significantly associated with audit fees, indicating a relationship between these audit committee characteristics and a demand for increased audit coverage, reflected in higher fees.
Lee et al. (2004) *AJPT)*	Examines the relationship between audit committee and board independence and auditor resignations.	Data from 190 firms with auditor resignations and a matched sample of 190 firms with auditor dismissals during the period from 1996 to 2000. *(USA)*	• Audit committee and board of director independence are both negatively associated with the likelihood of auditor resignation. • The financial expertise of the audit committee members is inversely related to auditor resignations • Audit committee independence is positively related with the quality (change of auditor from local or national to big audit firm) of the firm's successor auditor.

Author(s) *(Publication)*	Objective(s) of study	Details of study(Country)	Main Findings
Lee and Mande (2005) *(QJBE)*	Examines the association between the fees paid to the external auditor and effective audit committees	2000 data from 792 firms from the Investor Responsibility Research Center's (IRRC) database *(US)*	• Effectiveness of audit committee, measured by composite of audit committee independence and diligence, is positively associated with audit fees. • Initial results also suggest that effective audit committees seek to increase audit quality by reducing the non-audit services provided by the external auditor. • Once the non-audit fee is modelled endogenously the results show that there is no statistically significant association between the non-audit fees and audit committee effectiveness.
Goodwin-Steward and Kent (2006) *(A&F)*	Examines the association between audit fees, an effective audit committee and internal audit in an Australian setting.	2000 data from 401 Australian public listed companies – combining survey and public data. *(Australia)*	• Significant positive associations between the level of audit fees and the existence of an audit committee, the use of internal audit and audit committee meeting frequency. • Significant three-way interaction between audit committee independence, expertise and meeting frequency. • Additional analysis indicates that expertise is positively associated with audit fees only when meeting frequency and independence are low-consistent with audit committee members with accounting expertise demanding a higher level of assurance in these circumstances.
Knechel and Willekens (2006) *(JBFA)*	Examines the role of risks and controls in the determination of audit fees	2001 data from 50 Belgian companies that were listed on Euronext Brussels on December 31, 2001 *(Belgium)*	• Audit fees are higher when a company has an audit committee, discloses a relatively high level of financial risk management, and has a larger proportion of independent Board Members. • Audit fees are lower when a company discloses a relatively high level of compliance risk management.
Mitra et al.. (2007) *(RQFA)*	Examines the empirical relationship between ownership characteristics and audit fees	2000 data from 358 New York Stock Exchange-listed firms audited by the Big Five auditors *(USA)*	• Significantly positive relationship between diffused institutional stock ownership (i.e., having less than 5% individual shareholding) and audit fees • a significantly negative relationship between institutional block-holder ownership (i.e. having 5% or more individual shareholding) and audit fees. • Managerial stock ownership is negatively associated with audit fees.

Author(s) *(Publication)*	Objective(s) of study	Details of study(Country)	Main Findings
Mat Zain and Subramaniam (2007) *(CGIR)*	To test the impact of audit committee and internal audit function characteristics on internal audit contribution to the financial statement audit.	Data obtained from 76 questionnaires to chief internal auditors of companies listed on Malaysian stock exchange, 11 in-depth interviews with chief internal auditors and publish data. *(Malaysia)*	• Positive relationship between IA contribution to the financial statement audit and three dimensions of audit committee characteristics, namely, the proportion of independent audit committee members, the extent of audit committee members' experience and knowledge in auditing, accounting and finance and the frequency of meetings between the chief internal audit and the audit committee-high proportion of independent audit committee members with experience and knowledge in accounting, auditing and finance is able to enhance the efficacy of the IA function and encourages external auditors to rely more on the IA FUNCTION. • Positive relationship between the characteristics of IA function (size of IA, the proportion of staff with prior experience in auditing) and IA contribution to the financial statement audit • Insignificant relationship between IA contribution to financial statement audit and external audit fees. • Found positive association between audit fees and client size, client complexity and risk and a negative relationship with profitability.
Vafeas and Waegelein (2007) *(RQFA)*	Examines the relationship of measures of audit committee effectiveness and compensation incentives with corporate audit fees.	2001–2003 data from Fortune 500 companies Fortune 500 companies *(USA)*	• Audit committee size, committee member expertise, and committee member independence are positively associated to audit fee levels, consistent with the notion that audit committees serve as a complement to external auditors in monitoring management. • CEO long-term pay and insider ownership are inversely related to audit fee levels, substituting for external audit effort in motivating management.
Boo and Sharma (2008) *(A&F)*	Examines the relationship between internal governance, external audit monitoring and regulatory oversight	2001 data from 469 large listed companies comprising 252 finance companies and 217 companies from non-regulated industries. *(USA)*	• The association between audit fees and board / audit committee independence and size are weaker for regulated companies

Author(s) *(Publication)*	Objective(s) of study	Details of study(Country)	Main Findings
Ittonen et al. (2008) *(SSRN)*	Examines the association between female audit committee representation and audit fees	2006 data from 407 S&P 500 firms listed on the major U.S. stock exchanges excluding financial institutions. *(US)*	• Firms with female audit committee representation have significantly lower audit fees.
Hay et al.(2008) *IJA)*	Examines the relationship between controls and external auditing is one of substitution, or a complementary relationship.	1995-2005 data from 83 listed company (excluding financial institution) *(New Zealand)*	• Measures of internal auditing, corporate governance, and concentration of ownership are all positively related to audit fees
(Messier et al.(2011) *(AR)*	Examines how using the internal audit function (IAF) as a management ground (MTG) affects internal audit quality.	2000-2005 data from 572 firm-year observations from 232 companies in 47 different two-digit SIC code industries *(USA)*	• External audit fees are significantly higher for companies that use the CAE position as a MTG and evidence shows that this result is caused by external auditors concern with the internal auditors' objectivity rather than a reduction in internal auditor competence.
Abbott et al.(2009) *SSRN*	Examines the association between audit committee characteristics and audit fees	262 non-regulated, big 5 audited firms that filed both 10-K and Proxy forms with SEC in 2001. *(US)*	• Audit committees comprised solely of independent directors that meet at least four time annually are significantly, positively associated with audit fees
Desender et al. (2009) *(SMJ)* *Strategic Management Journal-Forthcoming*	Investigates how the ownership structure and the board of directors affect the demand for external audit.	2007 data from 247 French and Spanish listed companies *(France and Spain)*	• The ownership structure has a significant influence on the board's priorities and the demand for audit. • For widely-held firms, they find that board independence and CEO duality are significantly related to the audit fees. • For closely-held firms, the relationship between board characteristics and the demand for external audit becomes insignificant.
Krishnan and Visvanathan (2009) *(JAAF)*	Examines the relation between audit fees and a key determinant of the audit committee's effectiveness-that is, the financial expertise (accounting or non-accounting) of the audit committee.	2000-2002 data for 801 firm-year observations (2000-2002) from S & P 500 companies with exception of Financial institutions and companies not audited byy Big 4 audit firms. *(USA)*	• Audit pricing is negatively related to accounting financial expertise but not to non-financial expertise.

Author(s) *(Publication)*	Objective(s) of study	Details of study(Country)	Main Findings
O'Sullivan (2009) *(AF)*	Examines the impact of directors' and officers' (D&O) insurance on audit pricing in a large sample of UK companies.	Data from 753 public companies listed on London Stock Exchange for the year 1992. *(UK)*	• It was found that D&O insurance is associated with higher audit fees and also confirms that insured companies are larger, more complex and present a greater audit risk (using a range of measures) than uninsured companies. • Further analysis suggests that the impact of D&O insurance on audit fees may be influenced by company size, auditor size, and the extent of non-executive presence on the company's board.
Rainsbury et al.(2009) *(JCAE)*	Examines the association between the quality of audit committees on financial reporting quality and external audit fees in an environment where the formation of audit committees was unregulated	Data from 87 listed companies on New Zealand Stock Exchange in 2001. *(New Zealand)*	• Show no significant association between the quality of an audit committee and the quality of financial reporting. The results are robust to alternative measures of earnings quality. • The quality of audit committees has little impact on the level of fees paid to external auditors. • The results suggest that the benefits of 'best practice' audit committees may be less than anticipated by regulators and policymakers.
Tengamnuay and Stapleton (2009) *(JMG)*	Examines the perceptions of audit committee members, investors and analysts about the roles ACs perform and the importance of these roles	623 survey responses from chairman, chair of ACS, CIAs,CFOs,CPAs, investors and financial analyst. *(Thailand)*	• It was found that ACs placed greater emphasis on internal control systems, including internal audit and review of audit fees, than on roles associated with external audit and financial statements, indicative of an early stage in the process of evolutionary development.
Hoitash and Hoitash (2009) *(MAJ)*	Examines the association between audit committee characteristics and auditors' compensation and dismissals following the enactment of the Sarbanes Oxley Act (SOX).	Data from 2,393 companies (8,306 audit committee members) in 2004 *(USA)*	• Audit committee size and diligence are associated with higher audit fees. • The proportion of experts on the audit committee is positively associated with the level of assurance. • Experts with supervisory experience demand higher quality audits (higher audit fees) as compared to accounting financial experts.

Author(s) *(Publication)*	Objective(s) of study	Details of study(Country)	Main Findings
Engel et al. (2010) *(JAE)*	Examine the relation between audit committee compensation and the demand for monitoring of the financial reporting process.	Data from 3295 firm-year observations covering the period between 2000-2004 excluding utilities and financial institutions. *(USA)*	• Found positive correlation between total compensation and cash retainers paid to audit committees and audit fees and also the impact of the Sarbanes-Oxley Act, suggesting a positive link between audit committee compensation and the audit committee's demand for financial reporting process monitoring.
Ho and Hutchinson (2010) *(JIAAT)*	Examine the linkages between various internal audit characteristics and activities of Hong Kong firms and external audit fees.	53 public listed companies on Hong Kong stock Exchange that responded to the survey in 2004. *(Hong Kong)*	Lower audit fees associate with: Larger internal audit departments, Internal auditors who spend more time on examining financial statement and external audit related matters, Internal auditors who spend more time on system development and maintenance, Internal auditors who spend more time on reviewing operating efficiency and effectiveness including internal control, Internal auditors who spend more time on fraud investigations and special projects, Internal auditors who give external auditor more access to internal auditor's working papers.
Leventis and Dimitropoulos (2010) *(AA)*	Investigates the relation between audit pricing, quality of earnings and board independence.	Data from 248 firm year observation(from 97 companies listed on Athens Stock Exchange) for five years(2000-2004) *(Greece)*	The results show a positive association between: • Board independence and audit pricing (means strong governance is related to increased needs for quality assurance services) • Audit pricing and earnings management for a small size companies(might indicate potential red flag)
Masli et al.(2010) *(AR)*	Examining the potential benefits of Internal Control Monitoring Technology.	Data from 139 firm year observations of firms announcing SOX-related ICM technology initiatives over a four-year period (2003-2006) *(USA)*	• Implementation of internal control monitoring technology is associated with lower likelihood of material weaknesses, smaller increase in audit fees and smaller increases in audit delays during the post-SOX time period.

Author(s) *(Publication)*	Objective(s) of study	Details of study(Country)	Main Findings
Gul and Goodwin (2010) *(AR)*	Examine whether a firm's short-term debt maturity structure is associated with auditor assessment of audit risk and consequently audit fees	Data from 9,632 firm years observations from 2003 to 2006 excluding financial companies *(USA)*	• Find that short-term debt is negatively related to audit fees for firms rated by Standard & Poor's- consistent with more monitoring and better governance mechanisms in firms with higher short-term debt • Credit ratings quality is negatively related to audit fees, consistent with ratings quality reflecting a firm's liquidity risk, governance mechanisms, and monitoring from rating agencies • Find that the negative relationship between short-term debt and audit fees is stronger for firms with low-quality credit ratings
Zaman et al. (2011) *(JBFA*)	Examine the influence of audit committee effectiveness a proxy for governance quality on audit fees and non-audit fees using a new composite measure comprising audit committee independence, expertise, diligence and size.	Data from 135 companies (540 company year observations) of UK FTSE-350 in 2001-2004 *(UK)*	• Provide evidence that audit committee effectiveness (ACE) has significant positive impact on audit fees after controlling for board characteristics. • Frequency of board meeting, LnTA(size), number of subsidiary company and BIG4 have significant positive association with audit fees. • Major blockholder has negative relationship with audit fees. • ACE has positive association with Non-audit service fee(NASF) • NASF is negatively associated with audit committee financial expertise and audit committee independence and positively associated with audit committee size. • Board meeting, CEO-duality, board independence, company size and BIG4 has positive association with NASF.
Bliss (2011) *(A&F)*	Examines whether CEO duality affects the association between board independence and demand for higher quality audits, proxied by audit fee	*950 Australian publicly listed companies in 2003 (Australia)*	• There is a positive association between board independence and audit fees • Positive association is only present in firms without CEO duality, thus suggesting that CEO duality constrains board independence • Board size (the number of directors on the board) is positively associated with audit fees.

Author(s) *(Publication)*	Objective(s) of study	Details of study (Country)	Main Findings
			• Found that widely held firms are bigger in size, tend to pay more in audit fees and have more active audit committees. Results from multiple regression models confirm a significant negative relationship between audit fees and number of MLS. And found a positive relationship between audit fees and audit committee activities
Redmayne et al. (2011) *(IJAu)*	Examines the association between the existence of an audit committee and audit fees	New Zealand public sector entities for the period 1998–2000, when audit committee formation was voluntary (New Zealand)	• There is a positive association between audit committees and audit fees (but no significant interaction terms) in profit-oriented public sector entities • Audit committees are associated with lower audit fees and interact with audit risk in public-benefit entities.
Booth et al. (2012) (AFR)	Examines the relation between audit fees and managerial incentives in the mutual fund industry	6,543 funds in 2010 (USA)	• Audit fees are higher when managerial incentives with respect to reporting are poor.
Gotti et al. (2012) *(JAAF)*	Study whether managerial ownership and analyst coverage relate to audit fees	Data of 7,214 firm-year observations for the period 2000 to 2007 *(USA)*	• Find that managerial equity holdings and analyst coverage are negatively associated with audit fees and that these associations are both statistically and economically significant
Adelopo et al. (2012) *(JAAR)*	Examines the impact of ownership structure on audit pricing using number of Multiple Large Shareholders (MLS).	Data from 209 listed companies on FTSE 350 excluding financial institutions and utilities companies. *(UK)*	• Found that majority of listed firms in the UK have multiple large shareholders. • One way-ANOVA result showed that there are statistically significant differences in the audit fees, firm size and audit committee activities of these firms when they are categorised into "widely held", "concentrated" and "highly concentrated" firms.
Chan et al. (2012) *(A&F)*	Examines whether independent audit committee members' board tenure affects audit fees	1524 firm-year observations for years 2005 and 2006 (USA)	• Audit fees are negatively associated with the proportion of long board tenure directors on the independent audit committee, consistent with the notion that audit committee members' long board tenure results in lower audit effort.

3.4 Non-Audit Fees Literature

3.4.1 Non-Audit Fees and Auditor Independence

With Enron and other corporate scandals leading to a perceived failure of corporate governance, the issue of auditors simultaneously providing non-audit services became the focus of much discussion. This is due to the fact that the responsible auditor (Arthur Andersen), who audited companies involved in the three biggest US bankruptcies (Enron, WorldCom and Global Crossing), obtained more revenue from these companies from the provision of non-audit services (NAS) than from audit services. The over-reliance of audit firms on earnings from non-audit services is frequently cited as the reason why their independence as public "watch dogs" may be impaired and, as a result, it is claimed that drastic changes are needed to restore the confidence of the public. Such claims could be due to the fact that many accounting firms appeared to focus more on revenue generation and firm growth, especially in the 1980s, and sales of non-audit services became a major strategy for achieving firm growth (Vinatoru and Calota, 2009).

Responding to the controversial scandals mentioned above, and in an attempt to restore public confidence in an accounting profession which has been badly damaged in the eyes of the public, the accounting professions in many countries have produced guidelines on the code of ethics for auditors (Che Ahmad et al., 2006). This could, in one way or another, ensure the independence of auditors and hence protect the interests of investors. In the USA, the introduction of the Sarbanes-Oxley Act (2002) was designed to safeguard the interests of shareholders and they have brought about some fundamental changes for auditing firms and their clients regarding the joint provision of audit and non-audit services (Davis and Hollie, 2004). Audit firms are now prohibited from providing certain non-audit services to their clients. The prohibited services include: information technology work, internal audit work and expert services. Prior to this, SEC rules only required listed companies to disclose the amount paid to the incumbent auditors for non-audit services (SEC, 2000).

Before the Andersen scandal, many studies had attempted to investigate the issue of non-audit fees; however, the public only became aware of the

importance of such research from a public policy perspective after that case. In the early 1990s it was revealed that many companies paid more to their auditor for non-audit services than for the audit service (Ezzamel et al., 1996) and disclosure of the breakdown of non-audit services was very limited. A study in 2005 by Bigus and Zimmerman (2008) also found that among German companies non-audit services accounted for 42% of total fees, earning them nearly as much revenue as audit services. In Switzerland, the mean of non-audit fees to total fees amounted to 37.4% for listed firms (Stefani, 2006 as cited in Bigus and Zimmerman, 2008) and for listed firms in the UK, at 67.5% in 2002, the figure was significantly higher (Beattie et al., 2003). These findings could explain the growing public concern regarding auditor independence.

Following the requirement for disclosure of non-audit fees by the SEC, Frankel et al. (2002) carried out a US-based study of 3074 proxy statements on the SEC's EdGAR database, with filing dates between February 5, 2001 and June 15, 2001. It was found that non-audit fees are positively associated with the magnitude of discretionary accruals and negatively associated with share value on the date of fee disclosure. This could mean that shareholders are suspicious that the existence of non-audit fees might affect auditor independence. The results of Frankel et al. (2002) have stimulated great interest among other researchers regarding the association between non-audit and auditor independence. Hay et al. (2006) and Antle et al. (2006), however, failed to find any evidence that non-audit fees affect auditor independence. In contrast to the above findings, Wines (1994) reported results consistent with apparent independence impairment. Using a small matched sample of 29 financially distressed U.K. firms, Basioudis et al. (2006) also found that the magnitude both of audit fees and non-audit fees is significantly associated with the issuance of a going-concern modified (GCM) audit opinion. Contrary to findings of previous studies in the USA that documented no evidence of any impact of non-audit fees on auditor independence, Srinidhi and Gul (2007) found significant evidence to link the two variables based on their study using 2000 to 2001 data on financially distressed firms in the USA.

3.4.2 Non-Audit Fees and Audit Fees

The non-audit services most commonly offered by audit firms as listed by Firth (1997) include tax consultancy, system consultancy, management advice, international business advice, human resource management and financial and investment consultancies. The relationship between audit fees and non-audit fees has attracted much interest among researchers since the 1980s (e.g., Simunic 1984; Hillison and Kennelley, 1988; Firth 1997, Butterworth and Houghton, 1995). Investigation of the reasons for the dramatic increase in non-audit fees is a really important research area and has become more important even than the audit fee itself. Simunic (1984) analysed the client's decision to purchase MAS and audit services when their production functions are interdependent and tested for the existence and pricing effects of such knowledge spillovers. The data for the study were taken from the 397 observations of publicly held U.S. companies, collected as a stratified random sample by Simunic (1980), which (1) used a Big Eight auditor; (2) responded to the question which asked for the dollar amount of *MAS* fees paid to the auditor during the fiscal year 1976 and 1977; and (3) reported assets of less than $3 billion. The final sample of the study included 263 companies. The study found that the audit fees of clients who also purchase *MAS* from their auditors are significantly higher than audit fees of clients who do not do so. This result is consistent with the existence of efficiencies from joint production; however, the study also argues that while efficiencies from joint production may exist, this does not imply that joint performance of *MAS* and auditing is necessarily desirable. This is because efficiencies can be partially appropriated as rents to the CPA firm supplier, and hence can themselves create a threat to audit independence.

McMeeking et al. (2006) stated that the big firm premium might be explained in terms of interdependence between the fees charged by auditors for audit and non-audit services. Some researchers argue that a negative relationship could exist between audit fees and non-audit fees due to “knowledge spillover” (Simunic, 1984; Antle et al., 1997; Whisenant et al., 2003). “Knowledge Spillover” is a synergy or external economy “arising from providing audit and NAS as joint products” (Abdel-Khalik, 1990). Obtaining the NAS from the incumbent auditor is cost efficient where it could reduce client search and

transaction costs. Abdel-Khalik (1990, p. 296) argues that any efficiencies flowing from knowledge spillover should result in *lower* costs if a single auditor supplies both services than if the two services are sourced from two different audit firms. In addition, an auditor offering both types of service develops a greater understanding of the client company and hence the amount of audit testing and investigation could be reduced, leading to lower audit fees. However, similar to Palmrose (1986b), Abdel-Khalik (1990) finds audit fees do not differ significantly between clients purchasing audit services alone and those purchasing both audit and non-audit services. Firth (1997a) finds that audit and non-audit fees are positively related and contends that there is no apparent reason why this is so. More recent research which examined knowledge spillover using a simultaneous system of audit fee equations has also provided inconsistent results. While Whisenant et al. (2003) and Hay et al. (2006) reported no knowledge spillover, Antle et al. (2006) found evidence of knowledge spillover between audit and non-audit services. In an experimental setting, Joe and Vandervelde (2007) investigated whether knowledge gained from working on a non-audit task can be transferred to enhance the performance of the audit task. It was found that higher risk assessments were made by auditors who performed both services than were made by auditors who performed only audit services and had no access to the non-audit service working papers. The benefit from the "knowledge spillover" effect may be passed on by the auditor to their client in the form of reduced audit fees charges. On the other hand, in a competitive environment where client companies have more opportunity to change auditor and take advantage of the "low balling" associated with a newly appointed auditor, the auditor may try to avoid dismissal by reducing the audit fees and will recover the loss by increasing the NAS fees (Hillison & Kenneley, 1988). The situation whereby the auditor charges lower audit fees to gain more lucrative consultancy work from their client is called a "Loss leader" (Che Ahmad, 2006).

Despite the above theories (knowledge spillover and loss leader theory), many studies have found that non-audit fees are positively related to audit fees. Out of 19 studies from 1980–2003, 16 found a positive relationship, 1 showed an insignificant and 2 a significant negative relationship, and the overall meta-

analysis confirmed the positive relationship between audit fees and non-audit fees (Hay et al., 2006). A number of explanations have been offered for this apparently counter-intuitive result**.** First, it was argued by Simunic (1984) and Firth (2002) that the joint supply of audit and NAS will reduce the price per unit of the audit service, which leads to an increased demand for additional services by client companies, assuming that the demand for audit services is price-elastic. This course of action will increase the total audit cost. Second, the positive relationship might be due to client specific event(s) which generate demand for consultancy services and subsequently necessitate additional auditing (Ezzamel et al., 2002; Firth, 2002). Specific events in a company such as mergers and acquisitions, share issues, implementation of new accounting and information systems, appointment of a new Chief Executive Officer (CEO) and corporate restructuring all require additional audit effort and consultancy services (Firth, 2002). Third, those client companies requiring more NAS normally are problematic in general. Undertaking NAS provides the auditor with some insider knowledge of the riskiness of such companies and the auditor might charge higher fees to cover for the subsequent higher litigation risk. Fourth, monopoly power in service efficiency for non-audit services allows auditors to charge fee premiums (Hay et al., 2006). Accounting firms also sometimes promote themselves as "one stop" service providers (McMeeking et al. 2006). Regardless of the underlying explanation, a recent meta-analysis covering audit fee literature up to 2007 (Hay, 2012) confirms that audit fees and non-audit fees have a significant positive association and concludes that non-audit fees do not affect auditor independence.

Whisenant et al. (2003) investigated whether the characteristics of clients, auditors and the auditor-client relationship simultaneously determine audit and non-audit fees. It was the first study incorporating simultaneous equation models into the pricing of audit services. The results of the study show that audit and non-audit services are endogenous. The findings also suggest that either no knowledge spillover occurs or equal knowledge spillover exists between audit and non-audit services. This study motivated McMeeking et al. (2006) to model both audit and non-audit fees in a simultaneous equation framework. The study found that the big firm premium disappears as compared to results using a single

equation model. It is suggested that the big firm premium might be associated with the provision of NAS to UK audit clients when the proper allowance is made for endogeneity. On the other hand, Wu (2006) presented a model in which markets for both audit services and non-audit services were oligopolistic. The empirical implication of the testing is that because of competition-crossover effects between the auditing and consulting service market, finding empirical evidence for a knowledge-spillover benefit is likely to be difficult. In the same manner, a study by Stein (2006) also found that knowledge spillover benefits may be difficult to assess because of the intermediating effect of competition cross over. Both studies recommended the inclusion of the control variable "market concentration" in audit fee regression to increase the power of empirical testing.

In an earlier study in the US, Palmrose (1988) used questionnaire survey responses to study individual non-audit services as companies were not at that time required to disclose individual services. Palmrose (1988) broke up the non-audit fees into Management advisory service (MAS)-Accounting service, MAS-Non-accounting service and Tax service. From the analysis, Palmrose (1988) found tax services to be the most frequently purchased category when only one type of service was acquired. In the UK, Beattie et al. (1996) studied non-audit fees in detail by gathering data from the survey responses of finance directors of 300 listed companies and 307 audit partners of listed companies in 1995. The study categorises non-audit fees into accounting advice, account preparation assistance, corporate tax, corporate finance, due diligence, and IT. It was found that corporate tax is the non-audit service most frequently purchased from the incumbent auditor, while corporate finance is the service most commonly purchased from elsewhere. Beattie et al. (1996) disclose that most of the non-audit services provided by the auditors are not management consultancy work, but instead, essential accounting services that enable listed companies to comply with legal and regulatory requirements. They later concluded that the profession is inviting unnecessary criticism by bundling essential compliances services together with limited consultancy work into one disclosure figure and that it would be advantageous to show the split figures. The other study, by Ezzamel et al. (2002), categorised non-audit fees into tax services, finance services,

management consultancy, accounting, and other services. Using 193 survey responses gathered in 1995 from non-financial quoted companies, they also presented evidence that whilst management consultancy is not the most sought after service from a firm's incumbent auditor, it is the most common service purchased from non-incumbent auditors.

Analysing fee income for the years 1990 and 1999 (Beattie and Fearnley, 2002) identified three main types of non-audit fees: Accounting and Audit, Tax services and Consulting services, with consulting fees for 4% of the sample companies reported as exceeding audit fees for the year 1990. Levitt (2000) further asserted that among the then Big 5 consulting services represented 50% of their revenues, up from just 12% in 1977 (reported in DeFond et al., 2002: 6). Utilising information disclosed in proxy statements for the years 2000 and 2001 for 562 firm year observations, Lai and Krishnan (2009) studied the linkage between market value of equity and the particular non-audit service of designing and developing a financial information system (FIS). They focused on this type of service as this service was singled out for disclosure and subsequently banned by the Securities and Exchange Commission (SEC, 2000). It was found that the market value of equity is greater for firms that purchase FIS-related services from their incumbent auditors relative to firms that do not. They concluded that despite the negative perception associated with non-audit services, investors regard FIS-related services as value-adding activities. Table 3.2 summarises the empirical studies examining the relationship between audit fees and non-audit fees since the 1990s.

In conclusion, the literature review on audit fees and non-audit service relationship shows that the impact of non-audit fees on audit fees is inconclusive. Some researchers argue that a negative relationship could exist between audit fees and non-audit fees due to "knowledge spillover" (Simunic, 1984; Antle et al., 1997; Whisenant et al., 2003) and Lost Leader theory (Che Ahmad, 2006). On the other hand, some researchers are supporting the positive relationship between audit fees and non-audit services (e.g. Ezzamel et al., 2002; Firth, 2002). Since Enron's case, some development involving changes to the supply of audit and non-audit services have taken place.This is among the others

involving restrictions on the non-audit services that can be offered by the auditor. In addition, regulators are now debating on the issues of the total prohibition of non-audit services among auditor to their audit clients. Most of previous studies are done in the US (e.g Firth, 2002) while the recent UK studies (e.g Zaman et al.,2011) are concluded using the year 2001 to 2004 data of a rather small sample size (135 FTSE 350 companies). Therefore, this study aims to fulfil the gap existing in the literature by investigating this relationship between audit fees and non-audit fees using a bigger sample size (384 FTSE All Shares) and more contemporary data (2007 and 2010 data) after the restriction on non-audit services is imposed among listed companies in the UK. The use of a more contemporary data (i.e. 2007 and 2010 data) could capture the effect of recommendation of Smith Report (2003) regarding the non-audit services received from company auditors and current debate on total prohibition of non-audit services on the relationship between audit fees and non-audit fees.Therefore, the findings of this study could provide support for or against the total probihition of non-audit services.

Literature review also reveals an attempt to investigate the relationship between the detail component of non-audit fees and audit pricing exist since 1980s. The previous US studies (e.g. Palmrose, 1988) and the UK studies (e.g. Beattie et al., 1996) have utilised questionnaire survey response to study the relationship between details non-audit services and audit fees. Questionnaires survey response is used due to unavailability of published data with regard to detail components of non-audit services before year 2005. Since year 2005, the UK listed companies are required to disclose detail non-audit services purchased from their auditors [The Companies Regulation (Disclosure of Auditor Remuneration and Liability agreements), 2005]. Therefore, this study aims to fulfil the gap. Furthermore, this study contributes to the literature by investigating the relationship between detail non-audit services and audit fees using year 2007 and 2010 published data of 384 FTSE All Shares listed companies in the UK.

Table 3.2: A Summary of Empirical Studies Examining the Influence of Non-Audit Fees on Audit Fees since the 1990s[1]

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Simunic (1984) *(JAR)*	Analyses a client's decision to purchase MAS and audit services when their production functions are interdependent as well as testing for the existence and pricing effects of knowledge spill-over.	Data from 263 publicly-held companies in 1977. *(USA)*	• Audit fees of clients who purchase MAS from their auditors are significantly higher than audit fees of clients who do not do so. • While efficiencies from joint production may exist, this does not imply that joint performance of MAS and auditing is necessarily desirable.
Palmrose (1986b) *(JAR)*	Investigates the effect of non-audit services on the pricing of audit services.	1980-1981 data from 298 public and closely-held companies with big 8 firms as the incumbent auditor. *(USA)*	• Provides evidence of a positive relationship between fees for audit services and fees for three categories of non-audit services (accounting-related MAS, non-accounting MAS and tax).
Abdel-Khalik (1990) *(CAR)*	Provides a method to evaluate directly the cost (benefits) of knowledge spill-over arising from purchasing MAS from the incumbent auditor	84 survey responses from different audit regions in five states (excluding financial companies but includes private firms), study undertaken in early 1987. *(USA)*	• Purchasing MAS from the incumbent auditor does not have an impact on audit fees.
Davis et al. (1993) (AR)	Investigates whether the provision of non-audit services results in knowledge spillover and audit production efficiencies that could produce economic rents for the auditor.	98 clients of one large public accounting firm. *(USA)*	• Finds a weak, positive relationship between tax services and audit effort measures and between accounting-related consulting services and audit hours weighted by billing rate ratios. • Provides no empirical evidence that provision of non-audit services will affect auditor objectivity.

[1] Even though the table focuses on the analysis of literature starting from 1990, Simunic (1984) and Palmrose (1986) are included as these are the studies most commonly quoted by much of the audit pricing literature.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Ezzamel,et al. (1996) *(ABR)*	To report on the extent and nature of the provision of non-audit services to audit clients and to ascertain the association between fees for audit and for non-audit services in the UK.	1992/93 data from 314 UK Quoted Firms *(UK)*	• Income earned by audit firms from non-audit work for quoted clients averaged nearly 90% of the levels of audit fee earnings in 1992/93 –more than a quarter of clients paid more for non-audit services than for the audit • The extent of voluntary disclosure of the breakdown of non-audit services was limited and the existing disclosure requirement allowed considerable variety in the manner in which non-audit services fees incurred or paid abroad were disclosed. • There was a significant positive association between fees for audit and non-audit services, similar to that reported in the majority of US and Australian studies • Four of the nine interaction terms introduced were significant, implying that non-audit services fees may moderate the association between other explanatory variables and audit fees.
Firth (1997b) *(JBFA)*	Examination of audit fees paid by companies listed on the Oslo Stock Exchange.	Data on 157 listed companies on the Oslo stock exchange in 1991-1992 *(Norway)*	• Arthur Andersen and KPMC Peat Marwick have the largest market shares, together accounting for more than 50% of audit fees, consultancy fees, and total fees. • 75% of clients received consultancy services from their auditors. • There is a positive relationship between audit fees and consultancy fees.
Firth (1997a) (CAR)	A model is developed that seeks to explain a company's decision to purchase non-audit services from the auditor, proposing that companies that face potentially high agency costs purchase relatively smaller amounts of non-audit services from their auditor.	1992 and 1994 data on 500 largest British industrial, listed companies as ranked in *The Times 1000*	• Results indicate that companies that have higher agency-cost proxies are associated with smaller purchases of non-audit services from their auditors. • Director shareholdings, the shareholdings of the largest owner, and the debt-to total assets ratio affect the amount of consultancy services bought from the auditor.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Lennox (1999) *(EAR)*	Investigates the effect of non-audit services on audit quality	Data from 537 listed companies in 1988-1994 (UK)	• Following the announcement of the requirement to disclose non-audit fees, approximately 1/3 of UK quoted companies disclosed before the requirement became effective. • Auditor size, directors' shareholdings and non-audit fees were not significantly correlated with early disclosure. • Indicates a positive weakly significant relationship between disclosed non-audit fees and audit qualifications- suggests that when non-audit fees are disclosed, the provision of non-audit services does not reduce audit quality.
Clatworthy et al. (2002) *(JBFA)*	Investigate the market for audit services for UK National Health Service (NHS) trusts.	459 NHS Trust for the year ended 31st March 1997 (UK)	• A negative association between audit and non-audit fees in the UK National Health Service sector consistent with knowledge spillover.
Firth (2002) *(JBFA)*	To examine the provision of non-audit services (also termed here as consultancy services) to audit clients using data from UK	1,112 observations of company listed on International Stock Exchange in 1996	• Positive association between audit and non-audit fees observed in the UK is primarily driven by company specific events (e.g. mergers and acquisitions, restructuring, new finance, change in management) that result in the demand for more consultancy and audit services.
O'Sullivan, and Diacon (2002) *(IJA)*	Compare the pricing of audits in mutual and proprietary insurance companies (including audit committees and non-audit fees)	1992 data from 117 UK insurance companies *(UK)*	• There is weak evidence of the relationship between provision of non-audit service and audit fees. No evidence between audit fees and nature of non-audit service. Company size and complexity are the most important determinants of audit pricing in insurance companies, with significant price reductions earned by insurers specializing in either general or life insurance business.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Frankel et al. (2002) *(AR)*	Examines whether auditor fees are associated with earnings management and investigates the market reaction to the disclosure of auditor fees.	2001 data from 3,074 proxy statements on the SEC"S EdGAR database with filing date between February 5, 2001 and June 15 2001. *(USA)*	• Presents evidence that non-audit fees are positively associated with small earnings surprise and the magnitude of discretionary accruals • Found that audit fees are negatively associated with these earnings management indicators. • Also found a negative association between non-audit fees and share values on the date the fees were disclosed, although the effect is small in economic terms.
Ashbaugh et al. (2003) *(AR)*	Further investigation of the association between non-audit fees and biased financial reporting.	2001 data from 3,170 U.S. registrant firms for which 2,000 proxy statements were available on EDGAR or Global Access during November and December 2001 (excluding financial institutions) *(USA)*	• Finds no relationship between positive discretionary accruals and any of the auditor fee metrics when discretionary accruals are adjusted for firm performance and sample firms are partitioned by income-increasing versus income decreasing accruals • In the earnings benchmark tests, they find no relation between fee ratio and the likelihood that firms beat analysts' forecasts. • Also finds no evidence that the market reacts to the magnitude of non-audit fees relative to total fees
Whisenant et al. (2003) *(IJA)*	Investigates whether the characteristics of clients, auditors, and the auditor-client relationship simultaneously determine audit and non-audit fees.	2001 data from 2,666 listed firms disclosing fiscal year 2000 audit and non-audit fee data in proxy statements filed at the SEC from January 1 to August 31 2001. *(USA)*	• The results of the study show that audit and non-audit fees are endogenous. • It was found that inferences are different on the relation between audit and non-audit fees after considering the simultaneity of audit and non-audit services compared with those inferences from single-equation estimations. • Estimating the system of fee equations simultaneously, they find that provision of audit and non-audit services leads to no relation with audit fees, with suggestion that single-equation estimations suffer from simultaneous-equation bias. • Findings also suggest that either there is no knowledge spillover or equal knowledge spillover exists between audit and non-audit services.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Abbott et al. (2003b) *(CAR)*	Examine the association between audit committee characteristics and the ratio of non-audit service(NAS) fees to audit fees	538 companies filing proxies with SEC between Feb 5, 2001 and June 30 2001 (excluding mutual funds and other financial registrants) *(USA)*	• Audit committee comprised solely of independent directors meeting at least four times annually has significant negative association with the NAS fee ratio.
Larcker and Richardson (2004) *(JAR)*	To examine the relationship between the fees paid to audit firms for audit and non-audit services and the behaviour of accounting accruals.	2000-2001 data from 5,815 firm-years *(USA)*	• The ratio of non-audit fees to total fees has a positive relation with the absolute value of accruals • Using latent class mixture models to identify clusters of firms with a homogenous regression structure reveals that the positive association only occurs for about 8.5% of the sample • Find consistent evidence of a *negative* relation between the level of fees (both audit and non-audit) paid to auditors and accruals (i.e. higher fees are associated with smaller accruals) • The latent class analysis also indicates that this negative relation is strongest for client firms with weak governance
Felix et al. (2005) *(CAR)*	Investigates how external auditor provision of significant non-audit services and client pressure to use the work of internal auditor influence external auditors' use of internal auditors' work.	Audit engagements for 1996 were obtained from the same data set used in Felix et al (2001) and gathered through matched surveys completed by internal and external auditors for 74 Fortune 1000 firms *(USA)*	• It was found that when significant non-audit services are not provided to a client, internal audit quality and the level of internal-external auditor coordination positively affect auditors' internal audit reliance decisions • However, when the auditor provides significant non-audit services to the client, internal audit quality and the extent of internal-external auditor coordination do not significantly affect auditors' reliance decisions • When significant non-audit services are provided, client pressure significantly increases extent of internal audit reliance. • External auditors appear to be more affected by client pressure and less concerned about internal audit quality and coordination when making internal audit reliance decisions for clients for whom significant non-audit services are also provided.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Lee and Mande (2005) *(QJBE)*	Examine the association between the fees paid to the external auditor and effective audit committees	2000 data from 792 firms from the Investor Responsibility Research Center's (IRRC) database *(US)*	• Initial results also suggest that effective audit committees seek to increase audit quality by reducing the non-audit services provided by the external auditor. • Once the non-audit fee is modelled endogenously the results show that there is no statistically significant association between the non-audit fees and audit committee effectiveness.
Jeong et al. (2005) *(IJOA)*	Investigate the relationship among audit fees, mandatory auditor assignment and the joint provision of Non-audit and auditor services.	Data from 2025 firm year observations of companies listed on Korean Stock Exchange for the period between 1999 and 2002. *(Korea)*	• Assigned auditors charge significantly higher audit fees than freely selected auditors. • Joint provision of audit fees and non-audit fees does intensify the relationship between auditor assignment and audit fees. • Suggest that mandatory auditor assignment may improve auditor independence.
Antle et al. (2006) *(RQFA)*	Addresses the endogeneity issue by modelling the confluence of audit fees, fees for non-audit services and abnormal accruals in a system of simultaneous equations.	Data from 2,294 Firm year observations from 25 industries for fiscal year 1994-2000 and 1,570 USA firms' year observations for fiscal year 1994. *(US)*	• Finds evidence consistent with knowledge spillover (or economies of scope) from auditing to non-audit services and from non-audit services to auditing. • Do not find support for the assertion that fees for non-audit services increase abnormal accruals. • Found that non-audit fees *decrease* abnormal accruals, which is attributed to the productive effects of non-audit services.
Hay et al. (2006) *(JBFA)*	Examines evidence in New Zealand as to whether auditors providing more non-audit services are less independent.	1999-2001 data from top companies in New Zealand (177 for 1999, 224 in 2000 and 243 in 2001). *(New Zealand)*	• Found positive relationship between audit fees and non-audit fees. • No significant relationship between audit qualification or modification and non-audit fees. • There is no significant relationship between auditor change and non-audit fees.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Wu (2006) *(CAR)*	Presents a model in which both markets for audit services and non-audit services are oligopolistic.	Data from two oligopolistic markets: the audit market (CPA firms or auditors) and the consulting market (consulting firms or consultants) *(USA)*	• The empirical implication of the result is that because of competition-crossover effects between the auditing and consulting service markets, finding empirical evidence for knowledge spillover benefit is likely to be difficult. • Control variables for "audit market concentration" concerned with competition-crossover effects and "auditor expertise" concerned with knowledge spillover benefits should be included in audit fee regressions to increase the power of empirical tests. • With regard to policy implications, the analyses help explain the impact of the Sarbanes-Oxley Act on "market segmentation" and hence the profitability of accounting firms.
Stein (2006) *(CAR)*	To explain the theory/empirical evidence gap on the knowledge spill-over.	2001 data from 3,053 firm year observations of publicly traded companies *(USA)*	• The results suggest that knowledge spillover benefits may be difficult to find because of the intermediating effect of competition crossover. • Control variable for audit "market concentration" concerned with knowledge spillover benefit should be included in audit fee regressions to increase the power of empirical testing.
Che Ahmad et al. (2006) *(AAMJAF)*	To examine the effect of non-audit services on audit fees, to investigate the relationship between non-audit fees and the issuance of qualified audit opinion and to analyse the proportion of non-audit fees to total fees paid by a client to its auditor.	2002 data of 819 public listed companies. *(Malaysia)*	• Found significant positive relationship between audit fees and non-audit fees and significant relationship between non-audit fees and qualified audit opinions. • Finally, the descriptive analysis presents a worrying development regarding the high ratio of non-audit fees to total fee.
Srinidhi and Gul (2007) *(CAR)*	This study examines linkages between the audit and non-audit fees and accrual quality.	2000-2001 data from a database compiled by Standard & Poors from proxy statements *(USA)*	• Results show that accrual quality has a significant negative association with the magnitude of non-audit fees but a significant positive association with audit fees. • This latter result is consistent with the proposition that higher audit fee reflects higher audit effort and better judgments about the propriety of accruals, but is not consistent with the proposition that audit fee is associated with economic bonding.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Mitra and Hossain (2007) *(JBR)*	Examines the empirical relationship between the institutional stock ownership and the relative level of non-audit service fees.	Data from 335 firms listed on NYSE that are non-regulated, non-financial and non-service in nature and which have their year-end on 31/12/2000. *(USA)*	• There is a significant negative relationship between institutional ownership and non-audit ratio.
Joe and Vandervelde (2007) *(CAR)*	Investigate whether knowledge gained from working on a non-audit task can be transferred to enhance the performance of the audit task and whether any knowledge transfer can be achieved if the auditor only reviews the non-audit work papers prepared by non-audit staff in the same audit firm or a different audit firm.	2005 data from 84 in-charge auditors from a "Big 4" public accounting firm in US who were attending a firm-wide in-charge auditor training program. Method: Experiment *(USA)*	• Results shows that auditor-provided non-audit services can be beneficial in that knowledge transfer aids audit risk assessments when the same auditor performs both non-audit and audit services-higher risk assessments were made by auditors who performed both services than were made by auditors who performed only audit services and had no access to the non-audit service work papers.
Bigus and Zimmermann (2008) *(IJA)*	Analyses auditors' market shares and concentration in Germany on the basis of audit fees.	2005 data from 175 listed companies *(Germany)*	• Non-audit fees amount to 41.9% of the total fees and are nearly as important as audit fees. • The Big 4 firms obtained 87% of all the audit fees and 90% of the total fees. • PricewaterhouseCoopers is the market leader, based on the total fees and the audit fees. • KPMG earns the most in the sub-market for tax consultancy. • Audit firms specialize in certain industries or stock market segments. • Market concentration increases over time
Lim and Tan (2008) *(JAR)*	Investigates whether the relationship between the provision of non-audit services and the impairment of audit quality is conditional on auditor specialization.	2000-2001 data from 1,692 financially distressed firms *(USA)*	• It was found that audit quality, measured by increased propensity to issue going-concern opinion, increased propensity to miss analysts' forecast, as well as that higher earnings-response coefficients increase with the level of non-audit services acquired from industry specialist auditors compared to non-specialist auditors.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Lee et al. (2009) *(IJA)*	To examine whether audit report lags decrease as auditor tenure increases and to study whether the provision of non-audit services by external auditor reduces report lags	2000-2005 data from 18,473 firms-years representing 15 industries *(USA)*	• Both audit tenure and non-audit services are negatively significantly associated with ARLs. • Indicates that the longer the audit tenure, the more efficient auditors are in auditing their clients and the more non-audit services they supply, meaning more learning, thus reducing audit delays.
Quick and Warming-Rasmussen (2009) *(IJA)*	Investigate the influence of NAS on the perceived auditor independence.	2006 data from 98 survey responses from "Borsen-Team" an academic investment club at Darmstadt University of Technology *(Germany)*	• Shareholders generally perceive a negative effect on auditor's independence if NAS are provided, especially if NAS is provided by separate department of audit firm
Griffin et al. (2009) *(A&F)*	Examines the association between overseas and New Zealand governance regulatory reforms and New Zealand companies' audit and non-audit fees	Data from 653 company-year observations for the period 2002-2007. *(New Zealand)*	• Found that audit fees increased in New Zealand over 2002–2006 and such increases associate reliably with the transition to and adoption of NZ IFRS and not with earlier overseas governance reforms. • Also document a decrease in non-audit fees over the same period, but find no IFRS effect for non-audit fees.
Lu and Sapra (2009) *(AR)*	Develop a theoretical framework to investigate the determinants and consequences of auditor Conservatism in a capital market and implications of Section 201 of SOX for auditor conservatism and investment efficiency.	A theoretical paper: Model the interactions between corporate decisions and investors' decisions and assess how auditing mediates these interactions.	• By adjusting the mix of audit and non-audit fees, companies with high business risk induce auditor conservatism, while companies with low business risk induce auditor aggressiveness. • The nature of investment inefficiency(over or under) depends on its auditor attestation (conservative or aggressive) • Mandatory restriction of non-audit services imposed by section 201 increases audit conservatism, decreases a conservative auditor's audit quality and increases an aggressive auditor's audit quality, increases overinvestment and decreases under-investments and increases the audit fees.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Ghosh et al. (2009) *(JAPP)*	Examine the relationship between audit and non-audit fees and capital market perceptions of auditor independence	2001 - 2006 data of 21,797 firm-year Observations (client of Big 5 auditor). *(USA)*	• Found that earnings response coefficients (ERCs) are negatively associated with client importance, but there is no evidence of an association between ERCs and non-audit fee ratio- investors perceive client importance, and not non-audit fee ratio, as compromising auditors' independence. • Further, when they decomposed client importance into two components: audit fees and non-audit fees, from a given client as percentages of the total revenues of the audit firm, they found that only the audit fee component is significantly negatively related to ERCs- investors are concerned about perceived auditor independence when client importance increases because of audit fees, but not because of non-audit fees.
Lai and Krishnan (2009) *(A&F*)	Study the association of non-audit services with firm value.	Data from 562 firm-year observations for sample 1 firms (mixture of companies buying/not buying the service) and 408 for sample 2 firms that buy FIS-related services from the incumbent auditors in year 2000 or 2001. *(USA)*	• Found that the market value of equity is greater for firms that purchase FIS-related services from their incumbent auditors relative to firms that do not. • The levels of FIS fees are found positively related to firm value after controlling for total other fees, or total other non-audit fees. • Implication: Despite the negative perception associated with non-audit services, investors regard FIS-related services as value-adding activities.
Duh et al. (2009) (*RQFA)*	Examines whether non-audit service provision impairs auditor independence and whether the degree of auditor independence in Taiwan changed in the wake of the 2004 Procomp scandal	Data from 37 companies listed on the TSE and the GreTai securities market for 2003 and 2004. *(Taiwan)*	• The results indicate that the non-audit fees ratio was significantly and negatively associated with audit adjustment in 2003 (prior to the Procomp event) but not in 2004 (after the event). • The coefficient of manipulation for 2004 was significantly smaller than that for 2003. Using non-audit fees (rather than non-audit fees ratio) as an independent variable yields similar results. • These findings have implications for the amendment of the CPA Law currently under deliberation in that proscribing non-audit service may not be the only route to strengthening auditor independence.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Abidin et al. (2010) *(BAR)*	Study the audit market structure, fees and choices in a period of structural change (1998-2003) in UK	Data from UK companies listed on Main and AIM market of London stock exchange (9,006 observations) for the period 1998-2003. *(UK)*	• There has been significant upward pressure on audit fees since 2001 for smaller auditees and audit fee income for Big 4/5 did not change significantly, while the number of auditees fell significantly. • Andersen's demise reduced the level of inequality among top tier firms, with PWC retaining its position as the dominant firm. Former Andersen clients experienced an initial audit fee rise broadly in line with inflation. • There are significantly lower Non-audit fees among the companies.
Craswell et al. (2010) *(Conference Paper)*	To estimate a supply and demand system for the audit of Australian listed companies by combining publicly available data and proprietary data on audit hours (using simultaneous equation).	Data from 136 Australian listed companies. *(Australia)*	• The results from the study suggest that the higher audit fees obtained by suppliers of non-audit services result from two influences: a shift to the right in the demand curve and an upward shift in the supply-price function. • The benefits of any knowledge spillovers are offset by higher prices representing economic rents.
Zaman et al. (2011) *(JBFA)*	Examines the influence of audit committee effectiveness (ACE) as a proxy for governance quality on audit fees and non-audit fees using a new composite measure comprising audit committee independence, expertise, diligence and size.	Data from 135 companies (540 company year observations) of UK FTSE-350 in 2001-2004 *(UK)*	• ACE has positive association with Non-audit service fee (NASF) • NASF is negatively associated with audit committee financial expertise and audit committee independence and positively associated with audit committee size. • Board meeting, CEO-duality, board independence, company size and Big 4 has positive association with NASF.
Knechel et al. (2012) *(JBFA)*	Examines whether auditor-provided non-audit services generate knowledge spillover, using a sample of audits from New Zealand	2004-2005 data of 230 Firm year observations of New Zealand listed companies.	• A negative association between non-audit fees and audit lag, thus suggesting the presence of knowledge spillover. However, the knowledge spillover effect is limited to the city office providing both the audit and non-audit services

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Chan et al (2012) *(AF)*	Examines whether independent audit committee members' board tenure affects audit fees	1524 firm-year observations for the years 2005 and 2006. *(USA)*	• Find that audit fees are negatively associated with the proportion of long board tenure directors on the independent audit committee, consistent with the notion that audit committee members' long board tenure results in lower audit effort.

3.5 Chapter Summary

The objective of this chapter was to review prior literature on audit pricing. The chapter begins with a discussion of the importance of audit pricing research as identified by previous researchers such as Al-Harsani (2008), Gist (1992), Low et al. (1990) and Hay et al. (2006). It can be summarised that the reason people study audit fees is to evaluate the competitiveness of the audit market and examine issues of contracting and independence related to the audit process. In addition, knowledge in audit pricing could help clients in negotiating audit fees and controlling the internal aspects to reduce their audit costs. On the other hand, auditors could become more proficient in determining the appropriate audit fee.

The discussion continues with a general review of audit pricing literature. In 1980, Simunic's seminal paper introduced a model for audit fee determinants. This model identified size, complexity, industry, audit risk, audit tenure and auditor type as the key audit fee determinants. The model was used by many later studies, with new variables added. Over the past 30 years, many other determinants have been identified and added to the original Simunic model. These determinants can be classified as client attributes, auditor attributes and other attributes. Other determinants added recently by audit pricing researchers include the Herfindahl index, ownership control, auditor location, SOX, the effect of having two auditors, the effect of introduction of new standards, and economic crisis.

The second part of the chapter discusses literature relating to governance characteristics, including ownership structure, on audit fees. In terms of board characteristics, literature relating to board independence, size and diligence is discussed. This is followed by a review of literature regarding audit committee characteristics, which includes audit committee effectiveness, size, independence, expertise, diligence and commitment. This is followed by a review of audit-pricing literature relating to ownership concentration, non-executive share ownership and executive share ownership. The literature review reveals the gap in audit pricing literature as prior studies only investigates the

relationship between governance characteristics in limited scope (only focus on the board, audit committee or ownership structure structure). This part ends with a summary of audit pricing and governance literature since the 1990s.

The third part of the chapter discusses the non-audit fees literature. First there is discussion of the independence of the auditor, which seems to be affected by the amount of non-audit services provided to the audit client. Prior to the Enron-Andersen scandal, many studies investigated issues relating to non-audit fees. However, the importance of such research was only realised after that scandal. Studies post Enron found a continuous and worrying trend of high non-audit to audit fee ratios. However, many studies failed to show conclusive evidence of the relationship between lower audit quality and non-audit fees (e.g. Flankel et al., 2002). Studies have also investigated instances of financial distress, seeking to identify the relationship between auditor independence and going concern and/or other modified audit opinions received by companies. However, most of the studies found no significant relationship between non-audit fees and going concern or modified audit opinions, which suggests that auditor independence is not affected by the magnitude of non-audit services provided to their clients.

The discussion then turns to the relationship between non-audit fees and audit fees, which has attracted much attention since the 1980s. The findings of prior literature have been mixed, showing that the relationship between non-audit fees and audit fees is inconsistent. Theoretically the relationship between non-audit fees and audit fees should be negative due to "knowledge spill-over" effects. Any saving made by the auditor as a result of carrying out less testing and investigation will be passed on to the client, which will lead to lower audit fees. Another reason for the negative relationship highlighted by prior studies is the "loss leader", whereby the auditor reduces audit fees to gain more lucrative consultancy work from their client.

Despite the knowledge spill-over and loss leader theory, many studies have found a positive relationship between non-audit fees and audit fees. The first reason highlighted by prior studies for this positive relationship is the increase in demand from the client for more audit service as the price per unit of the audit

services is reduced as a result of joint provision of audit and non-audit services. Client specific events that require special consultancy services and at the same time necessitate additional auditing are identified as the second reason for the positive relationship between non-audit fees and audit fees. Third, as client companies that require additional non-audit services are normally problematic companies, joint provision provides the auditor with insider knowledge on client riskiness, thus higher audit fees are charged to cover the higher subsequent associated litigation cost. The fourth reason for the positive relationship is that monopoly power is reflected in efficient provision of non-audit services, which allows the auditor to charge a fee premium for the audit service. The last part review studies that investigate the relationship between audit fees and details non-audit fees. The gap is identified where a study using published data that is more reliable is needed as prior studies only rely on suyvey response.

Chapter 4: Theoretical Background and Hypotheses Development

4.1 Introduction

This chapter focuses on the theoretical background and the development of the hypotheses of the study. The chapter starts with a discussion on the use of agency theory as a basis for understanding the role of corporate governance and its assumptions, which underpin the present research. The chapter continues with the development of five hypotheses on the relationship between board characteristics and audit fees. This is followed by development of another eight hypotheses on the relationship between audit fees and audit committee characteristics and then by discussion leading to the development of three hypotheses on the relationship between audit fees and ownership structures. The chapter continues with the development of hypotheses on the relationship between non-audit fees and audit fees and also the effect of economic crisis on the earlier relationship. In addition to examination of the relationship between audit fees – along with governance characteristics, ownership structure – and non-audit fees, which are the main focus of this study, the relationship between other audit fee determinants used as control variables in this study is discussed.

4.2 Theoretical underpinning of the study

This study is heavily dependent on Agency Theory. This theory is rooted in the work of Berle and Means (1932) on the separation of firm ownership from management. Later, Jensen and Meckling (1976) identified the agency relationship between principal (the owner, shareholder) and agent (the management), whereby the principal engages the agent to perform services on their behalf. According to Jensen and Meckling (1976), the management is obliged to maximise the shareholder's wealth for long-term survival of the business. Therefore, some decision-making authority is given to the top management to ensure smooth business operation. As a reward for their best efforts in running the business, the management will be given good remuneration package and incentives. This theory assumes a model of man (manager) that is self-serving, individualistic and opportunistic in nature, who

prefers to maximise his own utility functions at the expense of the owners. As a result, the theory is built on the assumption that there is almost always a divergence of objectives between the goals of the management and those of the shareholders.

Past studies (e.g Abdul Rahman, 2006; Arnold and De Lange (2004) have highlighted possible problems that can occur in agency relationships. Abdul Rahman (2006) identified two problems, namely adverse selection (where the principal cannot determine if the agent is performing the work for which he is paid) and moral hazard (where the principal is unsure as to whether the agent has performed their work to their best ability, due to self-seeking motives). Arnold and De Lange (2004), on the other hand, associate the agency problem with different attitudes towards risk. Therefore, managers may not act in the best interest of the shareholders but prefer actions which could maximise their compensation, security, status and reputation. Timing of the main business objective (profitability) is another issue. The management normally prefer profit maximisation, which is short term in nature, to demonstrate success while the shareholders prefer shareholder wealth maximisation (which could maximise the share price, profitability and dividend payouts), which could maintain the success of the company in the long run (Arnold and De Lange, 2004).

Watts and Zimmerman (1978) assume that individuals act to maximise their own utility and consequently some managers' decisions might reduce the welfare of the principal as they are motivated by self-interest. Abdul Rahman (2006) explained that the agency problem is aggravated by information asymmetry which occurs when management have the competitive advantage of the information within the business over the owners. Consequently, management are tempted to place less emphasis on maximising shareholders' wealth but focus more on expanding the asset base, increasing turnover at the expense of long term profitability and paying themselves higher salaries.

There are costs associated with the agency problem which arise from the conflict between the principal (shareholders) and the agent (the management), such as costs associated with monitoring management, creating and implementing an effective incentive system and value destroyed by sub-optimal actions on the

part of the management (Abdul Rahman, 2006). Jensen and Meckling (1976) categorise agency cost into monitoring costs, bonding costs and residual costs. Monitoring costs are defined as the costs paid by shareholders to measure, monitor and control the activities and behaviour of the management. Included in these costs are the cost of appointing the board of directors to monitor management's activities and the cost paid to external auditors to verify the accuracy of the financial statements prepared by the management. Bonding costs, on the other hand, relate to the debt contract between the principal (the lenders) and agents (the borrowers). It is the cost of establishing and complying with the mechanisms of guaranteeing that the agent's remuneration is based on the principal's expectations on how much the agent's behaviour is likely to oppose the principal's interests. The costs incurred in these bonding activities include those relating to the time and effort involved in producing quarterly reports. Residual loss occurs because the costs of monitoring and bonding make it impossible to identify or stop all self-interested behaviour by managers. It is also argued that residual loss arises because the cost to overcome agency problem would be more than the benefits derived from doing so (Abdul Rahman, 2006). Failure of the board of directors to exercise due care in their oversight role over the management could cause agency cost. The best example of such an occurrence is the Enron case. The failure of the company happened because Enron's board of directors did not properly monitor the company's incentive compensation plans, thereby allowing top executives to "hype" the company's shares so that employees would add them to their retirement plans (Abdul Rahman, 2006).

As a conclusion, the main focus of the theory in the agency relationship is the selection of an appropriate governance mechanism between principal and agents to efficiently align the principal's and agents' interests, and hence minimise agency costs. Therefore, a number of mechanisms have been devised to reduce conflicts of interest and their impact on organizations (Abdul Rahman, 2006). First, incorporating into the contract between the contracting parties as many clauses as possible to simulate possible scenarios and attempt to provide for them in the contract could reduce the conflict between these parties. Another method of control includes linking management compensation to performance.

Reducing the free cash flow available within the organisation through debt financing could also solve the problem as it reduces the possibility of consumption of perquisites. Finally, increasing management's stake in the equity of the company could be another solution. It is suggested by Jensen and Meckling (1976) that increasing management's share ownership should align their interests more closely with those of other shareholders.

This study focuses on the relationship between the internal mechanism (including board of directors, audit committees and ownership structure) and the external mechanism that is the auditor. Agency theory provides a theoretical foundation to the study as it could explain the behaviour of the management and the mechanism in place towards goal unity between the management and the shareholders. The theory influences the formulation of the study hypotheses, research methodology and statistical techniques used in this study. Popular agency cost variables relevant to the study are examined. Relationships between variables are explained first in the context of Agency Theory and then other theories.

4.3 Development of Hypotheses: Board Characteristics and Audit Fees

The relationship between board characteristics and audit fees has begun to attract interest from audit fee researchers. By the early 2000s, only a few studies had looked at the issue (e.g. O'Sullivan, 1999; O'Sullivan, 2000; Peel and Clatworthy, 2001; Carcello et al., 2002 and Tsui et al., 2001). More recently, there has been slightly more research interest (e.g. Bliss et al., 2007; Boo and Sharma, 2008; Zaman et al., 2011 and Adelopo and Jallow, 2012). The board characteristic most frequently studied is the independence of board members as successive governance reforms since the 1990s have emphasised the monitoring potential of non-executive board members (e.g. Cadbury, 1992; Hampel, 1998 and Higgs, 2003, Combined Codes, 2000, 2003, 2006, 2008; UK Corporate Governance Code, 2010, 2012). The existence of effective board could reduce agency cost as an effective board stands as a good monitoring mechanism to protect shareholders' interests against misbehaviour of the management.

Board Independence and Audit Fee

Cadbury (1992), Hampel (1998), and Higgs (2003), various editions of the Combined Code and the current UK Corporate Governance Code (2012) have all emphasised the importance of non-executive representation on the board of directors as a means of ensuring greater independence and impartiality in board decision-making. Carcello et al. (2002) describe three factors which may motivate independent directors to prevent and detect any opportunistic reporting behaviour by management. First, the directors may seek to protect their reputations as experts in monitoring, because the market for directors punishes those associated with corporate failure or poor performance. Second, from a legal liability perspective, directors who fail to exercise reasonable care in discharging their monitoring responsibilities are liable to be subject to severe sanctions. Third, shareholders often suffer significant losses in the wake of financial reporting problems, so directors seeking to protect shareholder wealth may seek a higher quality audit service. Past studies found evidence of an inverse relationship between the percentage of outside directors and fraudulent financial reporting (Beasley, 1996; Dechow et al., 1996).

As an internal governance mechanism, non-executive directors could contribute to higher quality auditing in many ways. According to O'Sullivan and Diacon (2002), increasing the non-executive representation on the board of directors has the capacity for improving the quality of the audit process in the following three respects:

a. External auditors are able to discuss matters arising from the audit process with non-executive representative board members, free from managerial influence. This is especially important if auditors seek to question certain aspects of the preparation of the financial statements by management or require further (more costly) testing in order to reach an opinion on the quality of financial statements.

b. In negotiations with the external auditor, non-executives are expected to place greater emphasis on the extent and quality of the audit rather than on the cost, compared to executive directors.

c. Non-executives are expected to favour more extensive auditing in order to complement their own monitoring responsibilities since they share with auditors the objective of identifying and rectifying reporting errors made by managers, deliberately or otherwise.

O'Sullivan and Diacon (2002) suggested that because of the factors listed above, higher levels of non-executive representation are expected to result in higher audit fees. The hypothesis is supported by studies in the UK, US and Hong Kong, Greece and Malaysia which find that the proportion of non-executive directors has a significant and positive impact on audit fees (O'Sullivan, 2000; Carcello et al., 2000; Tsui et al., 2001; Leventis and Dimitropoulos, 2010; Bliss et al., 2007; Bliss, 2011). However, O'Sullivan (1999) and Peel and Clatworthy (2001) in their studies covering large UK companies in the post-Cadbury period did not find any evidence that board characteristics influence auditors' pricing decisions. This could be due to the fact that improved board monitoring may be counterbalanced by an increase in audit effort and the assurances demanded by non-executive directors.

In recognition of the non-executive directors' potential for improving monitoring and also in ensuring high quality auditing and greater transparency of financial reporting, the Revised Combined Code on Corporate Governance July 2003 requires the board to have a balance of executive and non-executive directors (and in particular independent non-executive directors) such that no individual or small group of individuals can dominate the board's decision making**.** As per earlier studies and theoretical expectation that it is expected that the presence of a larger number of non-executive directors, especially independent non-executive directors, on the board will lead to the purchase of a higher quality audit and that is expected to lead to higher audit fees. Hence, the first two hypotheses of the study are:

H1a: There will be a positive relationship between the proportion of non-executives serving on a company's board and the audit fee.

H1b: There will be a positive relationship between the proportion of independent non-executives serving on a company's board and the audit fee.

CEO Duality

Another issue related to board independence is CEO duality – whereby the same individual holds the positions of CEO and chairman. CEO dominated boards are likely to exist when the CEO and chairman of the board are the same person. It is argued that CEO duality upsets the balance of power among the top management team and therefore increases the agency cost as CEO duality restricts the board's effectiveness in controlling managerial initiatives and in decision-making since duality is assumed to increase information asymmetry between the CEO and the board (Boyd et al., 2005, Desender et al., 2009). Fosberg and Nelson (1999) state that firms with separated, clear-cut leadership perform significantly better in the areas of strategy formulation and implementation. This is supported by Farber (2005), who found that fraud firms have a higher percentage of duality, which makes it difficult for insecure directors to be honest when evaluating firm performance, thereby leading to long term organisational drift (Carver, 2006). Bliss (2011) found that the positive association between board independence and audit fee proxied for audit quality is only present in firms without CEO duality. He suggests that CEO duality constrains board independence. In the presence of a dominant CEO, non-executive directors are expected to have reduced influence in seeking an intensive audit (Desender et al., 2009) and as a result companies with CEO duality are more likely to have lower demand for external audit services (O'Sullivan, 2000), hence audit fees will be lower. A study by Tsui et al. (2001) found that the negative association between audit fees and independent corporate boards is stronger (weaker) for firms with low (high) growth opportunities. The results have two implications; first, from a policy perspective, they demonstrate that firms with CEO domination are associated with higher risk and higher audit fees. Second, the findings provide evidence consistent with the contracting theory that growth firms are associated with higher uncertainty, which in turn makes monitoring of managerial activities more difficult. An independent

corporate board is likely to reduce this uncertainty and mitigate potential opportunistic behaviour associated with high-growth opportunities. Independent board members who are concerned about incurring legal liability which could harm their reputations will support the external auditors in accomplishing their assurance duties. Lee et al. (2004) examined the relationship between board independence and auditor resignations and found that board independence is negatively associated with the likelihood of auditor resignation.

On the other hand, companies with CEO duality may be perceived by the auditor as having weaker internal governance, which might be expected to result in higher audit fees. This is supported by a study by Bliss et al. (2007), who found that the presence of CEO duality on boards is associated with higher audit fees. Desender et al. (2009) found that in widely-held firms, board independence and CEO duality are significantly related to audit fees, whereas in closely-held firms the relationship is insignificant. They argued that controlling shareholders encourage the board to focus on the provision of resources rather than monitoring, while boards in widely-held firms have a stronger focus on monitoring.

As a conclusion, the existence of CEO duality impairs the effectiveness of internal control, hence increasing the agency cost. Therefore it is expected that CEO duality will reduce board independence therefore will support the purchase of lower quality audit. Hence, the next hypothesis of the study is:

H1c: There will be a negative relationship between the existence of CEO duality and the audit fee.

Board Size and Audit Fee

Board size can be a determinant of the effectiveness of the board of directors in terms of the performance of its monitoring and oversight functions. More experienced and larger boards, comprising directors with a range of backgrounds, knowledge and expertise, have the potential for greater effectiveness and usefulness to the organisation as compared to smaller boards (Vafeas 1999; Beasley 1996; Yermack 1996 and Jensen 1993).

On the other hand, bigger boards could also be associated with more bottlenecks and sluggishness in decision making and, consequently, be more susceptible to management whims (Adellappo and Jallow, 2008). Jensen (1993, p. 865) stated that: 'as groups increase in size they become less effective because the coordination and process problems overwhelm the advantages from having more people to draw on'. Another disadvantage associated with larger boards relates to less effective monitoring due to potential free riding, communication breakdowns and inefficiencies (Dechow et al., 1996; Bushman et al., 2004). Yermack (1996) provided empirical evidence consistent with these views to demonstrate that companies with smaller boards have higher market value. Correspondingly, Beasley (1996) found that the likelihood of fraud increases with board size. Prior studies in the US (Boo and Sharma, 2008) and in the UK (Adelopo and Jallow, 2008) found an insignificant relationship between audit fees and board size. However, Chan et al. (2012), in a study based on 2005 and 2006 data in the US, found that board size has a significant positive relationship with audit fees.

Therefore it is expected that bigger board size could increase agency cost due to monitoring over the management becoming less effective. Drawing on the past literature, and consistent with the risk-based perspective, the current study expects larger boards to have a heightened risk of material misstatements; consequently, they will require a more extensive audit. It is therefore expected that board size, as defined by the number of directors on the board, will have a positive relationship with audit fees. Hence, the next hypothesis of the study is:

H2: There will be a positive relationship between the board size and the audit fee.

Board Diligence and Audit Fees

The other characteristics studied by Carcello et al. (2002) in relation to boards were the diligence of the directors and the expertise of board members. The diligence of the board is measured by the number of board meetings held, since the behaviour of individual board members surrounding such meetings, which

includes preparation before meetings, attentiveness and participation during meetings, and post-meeting follow-up, is not observable by the public.

Schedule C - that is the Disclosure of corporate governance arrangements in the Combined Code (2010), amongst other things, recommends the disclosure of the number of meetings held by the board and individual attendance by directors (A.1.2). Meeting frequency could reflect board effectiveness as boards that meet frequently are likely to be better informed and more diligent in performing their duties (Goodwin-Stewart and Kent, 2006). This is supported by earlier researchers, such as Lipton and Lorsch (1992) and Conger et al. (1998), who found that boards of directors that meet frequently are more likely to discharge their duties well. In addition, a board of directors that has frequent meetings has more time to identify and discuss problems, and this is expected to lead to superior performance of the company (Evans and Weir, 1995). Tauringana et al. (2008) found a significant negative relationship between frequency of board meetings and timeliness of annual reports for companies listed on the Nairobi Stock Exchange (NSE) in Kenya. This indicates that companies which hold meetings frequently publish their annual reports earlier, thereby enhancing the company's performance and providing evidence of an effective corporate governance mechanism. Hence, it is expected that such companies will adopt a more responsible attitude towards the shareholders, thereby reducing the agency cost, which could consequently lead to the purchase of relatively higher quality audit services, resulting in higher audit fees. Carcello et al. (2002) confirm that high frequency of board meetings could indicate a higher level of control in the company, leading to higher audit fees. Zaman et al. (2011) used number of board meetings to control for board effectiveness and found a significant positive relationship between audit fees and number of board meetings per year. The above discussion leads to the third hypothesis.

H3: There will be a positive relationship between the number of board meetings and the audit fee.

4.4 Development of Hypotheses: Audit Committee Characteristics and Audit Fees

Audit Committee Effectiveness and Audit Fees

An Audit committee represents a governance mechanism that needs to function effectively in order to limit potential agency conflict arising from the separation of corporate ownership and control (Abbott and Parker, 2000; Jensen and Meckling, 1976). Following the increased regulatory interest, especially following the failure of big corporations, many studies have been undertaken to examine the contribution of audit committees to auditing. Such studies include that of Lee et al., (2004), who argue that audit committees may affect the quality of auditing in several respects. First, the audit committee may demand that the firm appoints a more knowledgeable auditor with a better reputation (see e.g. Abbot and Parker, 2000; Chen et al., 2005). Second, the audit committee may improve audit quality by demanding a greater amount of audit effort from the incumbent auditor (e.g. Goodwin-Stewart and Kent 2006; Abbot et al., 2003; Carcello et al., 2002). Audit committees may also increase the independence of external auditors by providing support for auditors in potential disputes with the firm's management (see e.g. Knapp 1987; Carcello and Neal, 2000; DeZoort and Salterio, 2001; DeZoort et al., 2003). Finally, audit committees may enhance the integrity of audit reports by mitigating the potential threat of auditor dismissal based on managerial motives (see e.g. Carcello and Neal, 2000; Lee et al., 2004).

The relationship between effective audit committees and the external auditor has been studied by many researchers (e.g Zaman et al, 2011). Many studies have been carried out to examine the relationship between audit committees and audit fees, although earlier studies focused only on the existence of audit committees and audit fees (Collier and Gregory, 1996; Goddard and Masters, 2000; Coulton et al., 2001). To be more effective and efficient, audit committees should have certain characteristics; hence, researchers later started to examine the association between audit fees and audit committee characteristics and activities such as the independence and expertise of committee members and frequency of meetings (Carcello et al., 2002; Abbort et al., 2003; Sharma, 2003). Other characteristics used to measure effectiveness of the audit committee are committee size.

Recently, the relationship between audit committee characteristics and audit fees has been investigated further by, for example, Lee and Mande (2005), Goodwin-Steward and Kent (2006), Vafeas and Waegelein (2007) and Hoitash and Hoitash (2009).

Prior research (Goodwind-Stewart and Kent, 2006) explained that the relationship between audit committees and audit fees is complex and affected by both the demand for audit services by the client and the supply of audit services by the external auditor. From the demand side, the presence of an audit committee may have a positive association with audit fees by ensuring that audit hours are not reduced to a level that compromises the quality of the audit. This could reduce the risk of litigation and the loss of reputation in the event of fraudulent financial reporting. From the supply side, the audit committee's involvement in strengthening the internal controls of the company may lead the external auditor to reduce the assessed level of control risk. As a result of the auditor's reliance on internal controls, less testing will be carried out and this could lower the audit fee (Collier and Gregory, 1996). However, an increase in audit hours resulting from the need for audit partners to liaise regularly with audit committees, attend audit committee meetings and prepare reports for the committee could increase the audit fees. Furthermore, Goodwin-Stewart and Munro (2003) find that audit partners and managers believe that the presence of an audit committee has little impact on the level of audit testing but that audit fees are greater as a result of the increase in partner and manager time.

A further reason for a positive relationship between audit fees and audit committees is that an effective audit committee should reduce the threat of auditor dismissal and therefore could strengthen the auditor's bargaining position during fee negotiation (Abbot et al., 2003). Other recent studies have also found a positive association between audit committee characteristics and audit fees (Lee and Mande, 2005; Goodwin-Steward and Kent, 2006; Vafeas and Waegelein, 2007; Zaman et al, 2011). As one of the governance mechanisms to reduce agency cost, it is expected that an effective audit committee will request a higher quality audit to safeguard the shareholders from any financial irregularities and fraud. As a result, there will be an increase in audit effort

which will lead to higher audit fees. Similar Zaman et al. (2011) this study uses a composite measure for audit committee effectiveness on the following 4 variables: the size of the committee (at least 3 members), the independence of the committee members (contains only non-executive directors), number of committee meetings (a minimum of 3 meetings per year) and the existence of expertise on the committee (at least one finance expert on the committee). The 6th hypothesis is as follows:

H4: There will be a positive relationship between audit committee effectiveness and the audit fee.

Audit Committee Independence and Audit Fees

Agency theory suggests that the independence of the non-executive directors is crucial to the effective performance of the audit committee's monitoring function. Many previous studies, such as Beasley (1996), Hudaib and Cooke (2005) and Peasnell et al. (2005), have correlated the independence of directors with audit quality as independent directors are normally more interested in reducing the likelihood of fraud and earnings management. As a result, audit committees comprising only independent non-executive directors are able to exercise power over management and could demand greater audit scope to ensure audit quality (Zaman et al., 2011). In the US, Abbott et al. (2009) and Vafeas and Waegelein (2007) found that audit committee independence is positively associated with audit fee levels, consistent with the notion that audit committees serve as a complement to external auditors in monitoring management. Utilising data for 2001-2004 from FTSE 350 companies in the UK, Zaman et al. (2011) later also confirmed that audit committee independence has a positive association with audit fees. In the UK, successive Codes of Best Practice have clearly stated that audit committees should consist only of independent non-executive directors. Results from Zaman et al. (2011) reveal that 99% of their sample firms in 2004 had only independent directors on the audit committee, showing that some companies were still not following the requirements of the Combined Code of Corporate Governance (2003). Motivated by this finding, and despite the existing requirement for 100% independent director composition of audit committees, this study includes

measures for audit committee independence. It is therefore expected that audit committee independence will have a positive impact on audit pricing. This discussion leads to the following hypothesis:

H5: There will be a positive relationship between audit committee independence and the audit fee.

Audit Committee Size

It appears that an audit committee's size is a significant factor in ensuring its effectiveness. As indicated by the BRC (1999), "Because of the audit committee's responsibilities and the complex nature of the accounting and financial matters reviewed, the committee merits significant director resources". This is because a small audit committee will have an insufficient number of directors available to serve on the committee, thus its monitoring capacity is reduced (Vafeas, 2005). Alzoubi and Selamat (2012) suggest that a small audit committee is not capable of fulfilling its duties efficiently as the given assignments are always increasing. Due to the important contribution that can be made by this committee, it is expected that many companies will have more members than required on their audit committee. The larger the number of members on the committee, the more effective it can be since each of the members could contribute to the objectives and efficiency of the committee in performing its roles, especially its monitoring role.

The benefit of additional members, however, must be weighed against the incremental cost of poorer communication and decision making associated with larger groups. In general, it is recommended that the size of the committee should be limited to five (Levitt, 1998) or six members (National Association of Corporate Directors (NACD), 1999). Previous studies have suggested that the ideal audit committee size is either three or four members (Abbott et al., 2004; Vafeas, 2005; Xie et al., 2003). The Codes of Best Practice in Corporate Governance (2006) suggest an audit committee needs at least three members in order to provide the necessary strength and diversity of expertise and views to ensure appropriate monitoring. While the evidence is limited, it suggests that size does matter. For example, Archambeault and DeZoort (2001) find a

significantly negative relationship between committee size and suspicious auditor switches. On the other hand, Abbott et al. (2004) find no significant association between audit committee size and earnings misstatements. However, other studies, for example, Kalbers and Fogarty (1993), suggest that a large audit committee is more likely to enhance the status and power of the audit committee within the organisation and demand higher quality audits. In addition, Pincus et al. (1989) suggest that as they have more resources, larger audit committees are more likely to discover potential problems and therefore to fulfil their monitoring role more effectively. Consequently, large audit committees are expected to improve the quality of internal control as a result of enhanced status and increased resources and hence to be more effective in fulfilling their monitoring role (Zaman et al., 2011).

Vafeas and Waegelein (2007), using 2001-2003 data from 500 Fortune 500 companies, found that audit committee size is positively associated with audit fees. However, Boo and Sharma (2008) found that the association between audit fees and audit committee size is weaker for regulated companies. In the UK, Zaman et al. (2011) found that audit committee size is positively associated with audit fees. Based on demand perspective of the audit fees, it is expected that audit committees with larger numbers of members will require higher quality audits, resulting in higher audit fees. This discussion leads to the next hypothesis:

H6: There will be a positive relationship between audit committee size and audit fee.

Audit Committee Expertise and Audit Fees

Having a financial expert director on the audit committee could improve its effectiveness, especially in relation to financial matters. It is expected that financially knowledgeable members will be able to perform their oversight roles more effectively, especially in relation to detecting material misstatements (Raghunandan et al, 2001; Davidson et al., 2004; Defond et al., 2005). SEC (2002) firstly defined expertise by emphasising knowledge of accounting gained through extensive experience in the field. However, as a result of criticism of

this narrow definition, SEC (2003) broadened the definition of expertise beyond accounting experience to also include experience in finance, financial statement analysis or evaluation and supervision of accounting and financial executives or personnel. The UK's Corporate Governance Code specifies that at least one member of the audit committee should have recent and relevant financial experience. The code is not specific about what constitutes "relevant experience", but the Smith Report pointed out that it is desirable that the committee member whom the board considers to have recent and relevant financial experience should have a professional qualification from one of the professional accountancy bodies.

Raghunandan et al. (2001) demonstrated that audit committees comprised solely of independent directors and having at least one member with an accounting or finance background are more likely to have longer meetings with the chief internal auditor, are more likely to meet privately with the chief internal auditor, more likely to review the internal auditing programme and results, and review management's interaction with internal auditing. In the same respect, DeZoort and Salterio (2001) document that independent audit committee members having relatively high audit knowledge are more likely to support the auditor in auditor-management disputes over accounting policy. This is supported by Carcello et al. (2006), who found a significant relationship between having a financial expert on the audit committee and a lower level of earnings management and this association is most pronounced when the designated financial expert has prior work experience in accounting, for example, s(he) is a CPA, former CFO, corporate treasurer or controller. Another study in the US (Vafeas and Waegelein, 2007) found that audit committee expertise is positively associated with audit fee levels. In addition, Krishnan and Visvanathan (2009) report that as the percentage of financial experts on the audit committee increases, the likelihood of disclosing internal control weaknesses decreases. As one of the duties of the audit committee is to review financial reports prepared by management, having financially literate and qualified audit committee members on the board should lead to a more effective review. Hoitash and Hoitash (2009) suggest that audit committees with more expertise are more likely to understand

complex accounting issues and demand higher assurance levels from the auditors that the financial statements do not contain material misstatements.

Most of the prior research studying expertise is based on measurements of expertise outlined by the recommendations of the BRC (Blue Ribbon Committee, 1999) and SEC (2003). Previous studies have examined the importance of expertise by means of various measurements. Carcello et al. (2002) measured audit committee expertise using the number of other directorships held by audit committee members, while Abbott et al. (2003a) used the presence of at least one audit committee member with accounting or financial management qualifications. However, recent studies, including those of Hoitash et al. (2009), Carcello et al.(2008), Hoitash and Hoitash (2009), have shown that classifying financial expertise in a more granular way can reveal important insights on this matter. Hoitash and Hoitash (2009) highlighted the importance of separating the two types of expert as recent evidence emphasises the importance of distinguishing between diverse types of expertise due to inconsistent evidence with regard to the contribution of experts without accounting qualifications. Bedard et al. (2007), for example, found that both accounting and supervisory financial experts are associated with better internal control quality in their area of expertise. Similarly, DeFond et al. (2005) observed a positive market reaction to the appointment of directors with accounting expertise but not to those with other types of expertise. This is further supported by Carcello et al. (2008), who found that designated financial experts with accounting experience contribute to higher reporting quality but that supervisory financial experts do not. In the same vein, Dhaliwal et al. (2006) find that only accounting experts contribute to higher accrual quality, while Krishnan and Visvanathan (2009) find that conservative accounting reporting is positively associated only with accounting expertise. Therefore, this study separates financial experts into supervisory financial experts and accounting financial experts. A supervisory expert is an individual who has qualification as a result of knowledge obtained through supervising accounting tasks (e.g. CEO). On the other hand, an accounting financial expert is one who has an accounting qualification gained through experience (e.g. CPA, CFO). Krishnan and Visvanathan (2009) found financial expertise to be negatively related to audit

fees when the definition of expertise is restricted to accounting expertise. They argue that accounting experts lower the overall audit risk and, therefore, auditors value accounting experts for their potential to strengthen the effectiveness of audit committees. In support of this finding, Hoitash and Hoitash (2009) report that experts with supervisory experience demand a higher level of assurance in comparison to accounting experts as they do not have the necessary experience to understand complex accounting issues. Hence, in order to reduce the risk to shareholders, they authorise additional audit work. On the other hand, experts with accounting qualifications might be better negotiators and therefore able to purchase the same level of assurance at a lower cost.

Financial experts might also seek to purchase additional services in order to protect themselves (Hoitash and Hoitash, 2009). Better audit committees with better financial knowledge and experience will demand higher audit quality in order to avoid personal monetary and reputational loss (Abbott and Parker (2000). Evidence from the US suggests that financial expertise is positively associated with audit fees (e.g. Carcello et al., 2002; Abbott et al., 2003a). Consequently, it is expected that having a larger number of directors with financial knowledge and experience (financial expert) on the audit committee may increase the committee's demand for higher quality audits and this will lead to higher audit fees being charged by the auditor. So, the next hypothesis of the study is:

H7 : There will be a positive relationship between the number of financial expert members of the audit committee and the audit fee.

Audit Committee Diligence and Commitment and Audit Fees

Audit committee diligence will be tested using the number of audit committee meetings held per year as disclosed in the Annual Reports. An audit committee that is eager to carry out its functions of control must maintain a constant level of activity, so the Codes of Best Practice suggest three meetings a year (Cadbury Report, 1992; Smith Report, 2003). McMullen and Raghunandan (1996) found that audit committees of firms that are facing SEC enforcement actions or restating their quarterly reports are less likely to have frequent meetings. The

committees of only 23 percent of these problematic companies met more than twice a year compared to 40 percent for the other firms. Abbott et al. (2004) find similar results in a more recent sample. Audit committees meeting more frequently are expected to require higher quality audits, leading to higher audit fees.

Recent studies in the US examining corporate governance in an audit context have found that the number of meetings of the audit committee and the board (Abbott et al., 2003, Abbott et al., 2004) and the financial expertise of its members (Carcello and Neal, 2003) do indeed proxy for effective monitoring. Abbott et al. (2003), for example, found that the numbers of audit committee and board meetings, as well as the financial expertise of the audit committee, are positively associated with audit fees. Using data for the year 2000 from 401 Australian public listed companies by way of combining survey and public data, Goodwind-Steward and Kent (2006) also examined the association between audit fees, effective audit committee and internal audit. The studies revealed a significant positive association between the level of audit fees and audit committee meeting frequency. However, the study also found a significant three-way interaction between audit committee independence, expertise and meeting frequency. Additional analysis by the study indicates that expertise is positively associated with audit fees only when meeting frequency and independence are low, implying that audit committees with accounting expertise demand a higher level of audit assurance in these circumstances. Contrary to other researchers, Adelopo and Jallow (2008) found a significant negative relationship between audit committee meetings and audit fees in the UK. The study utilised data from 87 of the top 100 UK listed companies for the year 2006.

On the other hand, audit committee meetings not attended by members will serve no purpose at all. It is expected that committed audit committee members will form a highly effective audit committee which will demand more quality assurance for financial reports presented by the management, hence leading to higher audit fees being paid. The commitment of members is measured from their individual attendance at meetings of the audit committee in any given year. The above discussion leads to the next two hypotheses:

H8 a: There will be a positive relationship between the number of audit committee meetings and the audit fee

H8 b: There will be a positive relationship between the percentage of attendance at meetings by members of the audit committee and the audit fee.

4.5 Development of Hypotheses: Ownership Structure and Audit Fees

Previous studies such as Jensen and Meckling (1976), Keasey and Short (1999) and Mitra et al. (2007) have suggested that the ownership structure in an organisation matters as it could affect corporate monitoring and control. Essentially, as ownership becomes more dispersed, direct monitoring by shareholders becomes more costly and greater reliance on the audit as a mechanism of governance is expected. Jensen and Meckling (1976) argued that dispersed owners are more likely to anticipate opportunities for managers to pursue their own interests at the owners' expense. There are two sides to the argument. From the managers' perspective, aware of the shareholders' perceptions of their credibility and transparency, they are expected to push for a more comprehensive audit so as to signal their interest in the shareholders' welfare (O'Sullivan and Diacon, 2002). From the shareholders' perspective, Chan et al. (1993) suggested that in widely dispersed ownership companies they are more likely to rely on auditors as a means of managerial monitoring and this indirectly leads to higher quality audits and higher audit fees.

On the other hand, the major shareholders in companies with more concentrated ownership are more likely to be actively involved in monitoring managerial behaviour, thus reducing the dependence on the auditor; hence audit fees are lower. The results of past studies are mixed regarding the impact of large blockholder on audit fees. In the US, Mitra et al. (2007) used the percentage holdings of institutional investors as a measure of ownership structure and found a negative relationship between large percentage shareholding and audit fees. However, using the same measurement for his UK sample companies, O'Sullivan (2000) did not arrive at the same result. However, another UK study, Adelopo et al. (2012) found a significant negative relationship between the number of multiple large shareholders (MLS) and audit fees. Using more

contemporary data this study expects that the ownership of large blockholders will have a negative impact on audit fees as the existence of large blockholders reduces agency cost, therefore reducing the need for an extensive audit. In line with this thinking, the next Hypothesis is:

H9a: There will be a negative relationship between the ownership of large blockholders and the audit fee.

Another type of ownership that could have an impact on audit fees is board shareholding, particularly management shareholding. Chow (1982) suggests that when managers own smaller equity stakes in their firms, they have increased incentives to falsify financial disclosures as such information will be used by shareholders in setting managers' remuneration. Jensen and Meckling (1976) suggest a solution to this by arguing that the conflict between shareholders and management could be reconciled when managers possess an ownership interest in their companies. As a monitoring mechanism, the external auditor acts as a mediator to resolve the conflicts expected by agency theory to arise between managers and owners of the business (Fan and Wong, 2005). If there is no separation between management and the owner, no conflict would arise as agency costs are eliminated. Consequently, unless required by law, no auditor would be needed to observe or check the financial statement prepared as no earnings management, fraud or other manipulation by management would occur. However, whilst finding such an organisation nowadays is virtually impossible, finding an organisation with a substantial proportion of management shareholding is not. As their interest in the company increases due to a sense of belonging, it is expected that the management in companies with high management ownership will work hard to improve the company's performance: since higher performance means higher returns. In addition, there will be less involvement in earnings management since there will be less tendency or initiative to issue misleading information to the users of financial statements, especially the shareholders. This train of events leads to greater company success and higher quality of financial reporting and increases trust among auditors regarding transparency.

However, the relationship between management ownership and firm performance is not straightforward and has attracted much attention, especially among corporate finance researchers. Early researchers such as Demsetz and Lehn (1985) suggested a linear relationship between these two variables, while later analyses considered a non-linear relationship (for example, Kole, 1995). The issue of alignment and entrenchment plays an important role in shaping up any relationship found. Short and Keasey (1999) found that at low levels the shareholding by managers helps align the interests of managers and shareholders to the extent that there is less divergence of resources from value maximisation. However, at increasing levels of equity ownership, the manager's consumption of perquisites such as an attractive salary may outweigh the loss they suffer from a reduction in the value of the firm. At a higher stage, managerial ownership could lead to entrenchment as management have sufficient control to follow their objectives without fear of disciplinary action from the other shareholders. The study by Short and Keasey (1999) confirmed that UK management becomes entrenched at higher levels of ownership as compared to its US counterparts. Using information for taken-over companies between 1985 and 1996, Cosh et al. (2006) found evidence that overall board ownership has a strong positive impact on long run share returns and a weak positive impact on operating performance. When board ownership is split into CEO, executive and non-executive, only the relation between takeover performance and CEO ownership is significantly positive. This could be explained by the argument that substantial share ownership in a firm by board members can also result in a shift in conflicts of interest from management-shareholders to management-minority shareholders (Akhtaruddin and Haron, 2010). This is because, in line with entrenchment theory, having higher management shareholdings means less risk of retrenchment among managers and, consequently, outside shareholders' ability to monitor management is greatly reduced, which causes opportunistic behaviour to increase (Akhtaruddin and Haron, 2010). This claim is supported by the finding of Mak and Li (2001) that executive share ownership is negatively related to board monitoring of management activities. Based on a sample of 124 public listed companies in Malaysia, Akhtaruddin and Haron (2010) later found a negative relationship between board ownership and corporate voluntary disclosure. However, the relationship is weaker for firms with higher proportions

of Independent non-executive directors on Audit committee. These results support the notion that non-executive directors increase independence and could possibly explain why Cosh et al. (2006) found no relationship between company performance and executive share ownership, as non-executive directors moderate the effect of executive shareholdings.

The impact on audit fees of having a higher proportion of managerial share ownership should be viewed from two different perspectives. Looking at the demand for audit services, the degree of management ownership is expected to be negatively related with audit fees due to the demand for high quality audits decreasing. This is supported by previous studies which found that at high levels of ownership managers become entrenched (Sudarsanam et al., 1996) and prefer to satisfy their own objectives at the expense of other shareholders' interests; thus they require a reduced audit. However, looking at the supply of audit services, there are two possible scenarios. If the management share ownership is seen by the auditor as affecting the independence of the board (leading to lower disclosure and lower board monitoring), the auditor might charge a premium to compensate for the higher associated audit risk. On the other hand, if the assumption is that share ownership by the management could improve corporate governance, this will reduce the need for a high quality audit, hence audit fees will be lower. Studying the relationship between ownership structure and audit pricing by utilising data from a sample of 402 quoted companies in the UK prior to the adoption of the recommendations of the Committee on the Financial Aspects of Corporate Governance (Cadbury, 1992), O'Sullivan (2000) found that audit fees are negatively related to the proportion of equity owned by executive directors and non-executive directors. Overall, O'Sullivan (2000) suggested that non-executive directors encourage more intensive audits as a complement to their own monitoring role, while a reduction in agency costs is expected through significant managerial ownership resulting in a reduced need for intensive auditing. The significant negative association between audit fees and management ownership found in O'Sullivan (2000) is supported by two US studies conducted in 2007. First, utilising data from 358 New York Stock Exchange listed firms which were audited by Big Five auditors in the year 2000, Mitra et al. (2007) found that managerial ownership is negatively associated

with audit fees. Utilising more recent data (2001- 2003) of Fortune 500 companies, Vafeas and Waegelein (2007) documented an inverse relationship between audit fee levels and insider ownership. This suggests that insider ownership acts as a substitute for external audit effort in monitoring management. More recently, Gotti et al. (2012) found that management equity holdings and analyst coverage are negatively related with audit fees. Based on the above findings, it is expected that the percentage of equity owned by executive directors will reduce the audit work, leading to lower audit fees. This leads to the following Hypothesis:

H9b: There will be a negative relationship between the percentage of ownership held by executives and the audit fee.

It is also interesting to investigate the relationship between Non-executive share ownership and audit fees. The existence of non-executive directors on boards could improve board independence, especially regarding monitoring the behaviour of management. Resource dependence theory supports having more independent directors on boards because of the expertise, prestige and contacts they bring (Kesner and Johnson, 1990). Despite the obvious benefit of having a majority of non-executive directors on the board as suggested by agency theory, some studies have acknowledged certain drawbacks. The shortcomings identified by researchers include the stifling of strategic action, excessive monitoring and lack of the business knowledge needed to be effective (Goodstein et al., 1994, Baysinger and Butler, 1985, Patton and Baker, 1987). Demb and Neubauer (1992) question whether non-executive directors are actually independent, which is especially relevant if these directors are former employees of the firm or have a personal relationship with the management. If opportunistic behaviour among executive directors can be reduced or eradicated by giving them share ownership, as was suggested by Jenson and Meckling (1976), the same can also be done in the case of non-executive directors as a way of motivating them to enhance the company's performance.

As compared to management ownership, very few studies appear to have explored the effect of non-executive share ownership on business performance (Swan and Honeine, 2010). Swan and Honeine (2010) concluded that listing

requirements of many countries, for example, the Australian Security Exchange (ASX), do not encourage non-executive share ownership as they believe it will affect non-executive independence. By contrast, New York Stock Exchange (NYSE) listing rules do not treat stock ownership as a barrier to independence. Utilising a unique panel dataset, they observed a sizeable positive relationship between non-executive director ownership and firm performance. More specifically they found that firms with a non-executive director with substantial shareholding perform 29.7% better than otherwise. Consequently it is expected that higher non-executive share ownership will lead to less audit work and hence lower audit fees. O'Sullivan (2000) found that ownership by non-executive directors exerts a significant negative impact on audit fees. Both the regression results and the correlations suggested that non-executive ownership and executive ownership affect audit fees in a similar way. This indicates that nonexecutives possessing significant equity interests may also have business or family links with the company and consequently behave in a similar way to their executive colleagues. Based on the result of past studies it is expected that non-executive share ownership will lead to less audit work and hence lower audit fees. This expectation leads to the following Hypothesis:

H9c: There will be a negative relationship between the percentage of ownership held by non-executives and the audit fee

4.6 Development of Hypotheses: Non-Audit Fees and Audit Fees

According to agency theory, external auditor is one of the mechanisms that could reduce agency cost. It is expected that the provision of non-audit service to audit client may affect auditor independence. Therefore, a negative relationship is expected between audit fees and non-audit fees. Studies which find a negative relationship argue that audit fees should decrease as a result of external economic synergy arising from the provision of audit and non-audit services and known as "knowledge spillover" (Simunic, 1984; Antle et al., 1997; Whisenant et al., 2003). In addition, in a competitive environment where clients have freedom of choice, the dismissal of auditors is common, and auditors may regard reducing audit fees and recovering the loss by charging higher Non-audit fees to the client as an alternative way to operate (Loss Leader Theory).

Despite the theoretical logic of a negative relationship between audit fees and non-audit fees arising from the joint provision of audit and non-audit services, many researchers have reported a positive relationship between the two. The meta-analysis undertaken by Hay et al. (2006) demonstrates that the majority of studies undertaken between 1977 and 2003 found a positive relationship between non-audit fees and audit fees. The explanation for such a positive relationship is that the joint provision of non-audit and audit services reduces the price per unit of audit services and triggers the purchase of more audit service. The alternative explanation is that client specific events such as mergers and acquisitions, share issues, and implementation of new accounting and information services generate demand for consultancy services and at the same time these result in additional auditing. Furthermore, providing non-audit services could expose to the auditor the real financial position of the client and enable the auditor to price the relevant risk identified and accordingly charge higher audit fees for problematic clients. Monopoly power, as reflected in efficiency of non-audit service provision, also allows the auditor to charge an audit fee premium (Hay et al., 2006), especially with accounting firms increasingly promoting themselves as "one stop" service providers (McMeeking, 2006).

The inconsistent results of past studies on the relationship between non-audit fees and audit fees as well as several changes that have taken place recently with regards to the disclosure of non-audit fees, and the continuing concern among many parties regarding the provision of non-audit fees by the auditor motivated the current author to conduct a further investigation on this relationship using more current data drawn from a bigger sample and including financial institutions, which have mostly been ignored by previous studies. Previous studies like Ezzamel et al.(2002) and Firth (2002) found positive relationship between non-audit fees and audit fees, therefore this study also expects the same relationship between audit fees and non-audit fees. This discussion leads to my next Hypothesis:

H10: There will be a positive relationship between total Non-audit fees provided by the auditor and the audit fee

4.7 Development of Hypotheses: the Effect of Economic Crisis

4.7.1 Governance Characteristics and Audit Fees

Many parties have blamed corporate governance as one of the reasons for the recent economic crisis. Financial Times columnist John Plender writes "the credit bubble was not just a simple market failure, but a failure of business leadership, corporate governance and risk management, exacerbated by flawed incentive structures within banks" (Plender, 2008) .

In the same vein, a report has pointed out that the 2008/2009 financial crisis can to an extent be attributed to failures and weaknesses in corporate governance as there was a failure in protection from excessive risk taking and irresponsible behaviour (ACCA, 2009). The report later highlighted a few governance-related reasons for the economic crisis. The first reason is dysfunctional boards that did not fully understand the risks and impact associated with the strategies and activities they approved. In addition, the boards did not provide adequate monitoring of implementation, accounting, reporting and audit. The reason for this is identified as lack of appropriately qualified non-executive directors with the broad range of skills and knowledge required to fully understand the complex financial and non-financial matters involved. Irresponsible ownership also exacerbated the financial crisis as powerful shareholders did not play an active enough role in improving governance. Remuneration systems that encouraged short-term thinking and unsustainable risk taking at the expense of longer term sustainability were another factor that contributed to the failure of governance and hence to the economic crisis. It is suggested that the corporate governance model needs changing and corporate governance practices should be enhanced to restore confidence to markets. However, Barker (2008,p.9) disagrees with this opinion and comments:

> "The credit-crunch and the resulting crisis amongst leading financial institutions are increasingly presented as a crisis of corporate governance. However, although current problems are indicative of shortcomings in the global financial architecture, they should not be interpreted as reflecting dysfunction in the broader UK corporate governance model. Consequently, it is essential that UK policy makers focus their response to the crisis on the underlying source of the problem:

the financial regulatory framework (both in the UK and globally). They should resist populist calls for more general corporate governance reform".

He also highlighted that the challenge for the future is to ensure that the UK model of corporate governance remains an asset rather than a liability for the UK business community.

UK corporate governance is guided by the Codes of Corporate Governance. Since its establishment in 1992, the Code has been used widely and gained some reputation. Indeed, it seems that there is almost a belief that complying with the Code in itself constitutes good governance. However, the Code is only a guidance in general terms to principles, structure and processes. It cannot guarantee effective board behaviour and the boards have a lot of room within the framework of the Code to decide for themselves how they should act. However, running a corporate board successfully is extremely challenging and demanding as it requires high quality efforts due to time and knowledge constraints and the need to maintain mutual respect and openness between a cast of strong, able and busy directors dealing with each other across the different demands of executive and non-executive roles.

The financial crisis triggered a widespread reappraisal of governance systems globally. In the UK the governance of banks and other financial institutions has been reviewed (Walker Review, 2010) simultaneously with the revision of the Code of Corporate Governance. Two principal conclusions were drawn by the FRC from its review. First, that much more attention needed to be paid to following the spirit of the Code as well as its letter. Secondly, that the impact of shareholders in monitoring the Code could and should be enhanced by better interaction between the boards of listed companies and their shareholders. The Stewardship Code was then published in 2010 and revised in 2012 to provide guidance on this interaction and with the aim to promote the long term success of companies in such a way that the ultimate providers of capital also prosper. Effective stewardship benefits companies, investors and the economy as a whole (FRC, 2012). Following the Walker Review (2009) the UK Corporate Governance Code was reviewed in 2010 and 2012. Many improvements were

made regarding boards of directors, especially in relation to their characteristics and effectiveness. In addition, Guidance on Audit Committees was published in September 2012 to assist company boards in making suitable arrangements for their audit committees, and to assist directors serving on audit committees in carrying out their role.

It can be concluded that regular revision and updating of the UK Corporate Governance Code and Guidance on Audit Committees will allow identification and enhancement of the principles that underlie effective boards and audit committees, especially following the economic crisis. These revisions enhance the quality of boards and audit committees as an internal monitoring mechanism, therefore reducing agency costs. To complement this, the UK Stewardship Code sets out the principles of effective stewardship by investors so that they can play an active role towards success of the company. This is important because, as was pointed out earlier, irresponsible ownership contributed to the financial crisis as powerful shareholders did not play an active enough role in improving governance. It is expected that the changes to the Codes will improve the characteristics and effectiveness of the internal governance mechanism (board and audit committee) and also the involvement of the investor in company operation.

However, as discussed earlier, the Codes only provide guidance on best practice but the implementation will be in the hands of the board and also the shareholders. An online survey (Mckinsey, 2013) involving 1597 corporate directors worldwide reveals that boards have taken to heart the new and higher demands placed on them. However, some directors say that they feel ill equipped to live up to these expectations because of inadequate expertise about the business and the lack of time they can commit to their board duties. This finding shows that the boards are under great pressure because many parties have put huge responsibility on them to monitor the company properly. On the other hand, the auditor, as another monitoring mechanism, is also under great scrutiny and pressure, especially when most company failures (e.g. Enron, WorldCom) have been blamed on auditors for failing to detect material misstatement and errors before the companies went bankrupt. It is expected that

the auditor will conduct sufficient investigation and evaluation of the quality of corporate governance of the company before determination of the extent of audit procedure needed. This therefore will strengthen the relationship between audit fees and governance characteristics. As a result, it is expected that the relationship between audit fees and governance characteristics will be stronger after the economic crisis (2010) than before the economic crisis.

H11a: The relationship between governance characteristics and audit fees is stronger after the economic crisis.

4.7.2 Non-Audit Fees and Audit Fees Relationship

An independence auditor could monitor the behaviour of the management and reduce agency cost. However, it is argued that the provision of non-audit services may affect auditor independence. The literature review chapter and the development of hypotheses for non-audit and audit fees have highlighted changes that have been introduced on disclosure of non-audit services, total prohibition of provision of non-audit services by the company auditor to their audit client, and compulsory auditor rotation, especially after the economic crisis. These changes have placed auditors under great pressure to maintain their reputation and also their independence. This is supported by stronger governance as a result of regular revision of UK Corporate Governance Code and Guidance on Audit Committees especially following the economic crisis. Guidance on Audit Committee (2008) for example contain detailed guidance for audit committees regarding the approval of non-audit services, to ensure that the independence of external auditor is not impaired. Therefore, it is expected that auditor independence will be stronger after the economic crisis as a result of these changes. Consequently, this study expects that the relationship between non-audit and audit fees after the economic crisis will be stronger than the relationship found before the economic crisis. This expectation leads to the next hypothesis:

H11b: The relationship between non-audit fees and audit fees is stronger after the economic crisis.

4.8 Control Variables

Consistent with previous audit pricing studies, this study includes other audit fees determinants in the model to control for client related attributes such as client size, complexity and also audit risk. Besides these, auditor related attributes such as auditor size and location could also affect the audit fees they charge to their audit client. Other attributes considered include report lag and the seasons when the audit work is undertaken. Following is discussion of the control variables.

Client Size

The most significant and consistent explanatory variable in determining audit fees is the size of the company being audited. It is expected that the bigger the company, the more audit effort is needed to audit the financial statements, in the form of testing and analysis of data and information (Simunic, 1980; Firth, 1985; Chan et al., 1993; Pong and Whittington, 1994; Simon, 1995; Firth, 1997; Adams et al., 1997). Hence, the larger the company, the higher the audit fee charged by the auditor. Prior studies have commonly used either total assets or revenue as measurements of fee size. Of 111 research studies on the determinants of audit fees, published up to 2003, 87 used total assets while 25 used revenues (Hay et al., 2006). Total assets is considered suitable for audit firms that adopt an audit approach which is essentially balance sheet based, while turnover may be a better explanatory variable for auditors employing a transactions based approach to the audit (Chan et al., 1993). In this respect, many studies (e.g. Low et al., 1990; Firth, 1997; Carson et al., 2004; Lawrence et al., 2011) have found that the size of the client company as measured by their total assets is the major factor in determining the audit fee. On the other hand, other studies, which prefer to use the natural logarithm of annual net sales as a measure of company size, also report a significant positively association between client size and audit fees (e.g. Chan et al., 1993; Collier & Gregory, 1996; Owusu-Ansah et al., 2010). Total revenue may be superior to total assets in the sense that it is not so susceptible to accounting policy choices, financial structure and capital intensity of a company as is the case for the total assets measurement (see Chan et al., 1993:766). Furthermore, in subsequent regression

models, a sales-based model may exhibit relatively lower heteroscedasticity than an asset-based model (see Collier and Gregory, 1996:190).

However, Chan et al. (1993) stressed that both measurements of client size have their drawbacks. For example, differences in total assets may be influenced by the age profile of assets and choice of accounting policy, especially with regard to fixed asset revaluations, treatment of goodwill and other types of assets. In addition, using assets to represent size may be problematic due to its relationship and subsequent interaction with complexity variables, especially those which incorporate total assets directly into the calculation (e.g. inventory to total assets ratio and debtors to total assets ratio). As for the use of revenue, differences in the definition of revenue amongst different industries may affect subsequent comparisons.

Economies of scale in the auditor's production function and the likelihood that larger companies will have more sophisticated internal control procedures suggest that the relationship between auditee size and audit fees is unlikely to be linear (Chan et al., 1993). This is supported by the findings of Carsons et al. (2004). Using 1995-1999 data from 795 audit engagements in Australia, the study presented evidence that audit fees are not linearly related to client size as is typically assumed in audit fee models. In the US environment, O'Keefe (1994) also found clear evidence that, ceteris paribus, audit effort is a concave function of client size. In addition, the study also found that the documented concave relationship between audit fees and size is caused partially by the employment of a relatively large proportion of low-level (and therefore relatively inexpensive) professional labour as clients increase in size. As a conclusion, despite the strong argument that a bigger company is likely to have stronger internal control mechanisms that will reduce the audit fee charged by the auditor, the majority of past studies (from 1980-2003), as reflected in the meta-analysis in Hay et al. (2006), have reported a significant positive relationship between client size and audit fees. In his latest paper, Hay (2012) confirms that client size was the audit fee determinant most consistently used by researchers between 1980 and 2007.

Client Complexity

A second issue commonly addressed in audit pricing studies is the complexity of the client company (e.g.: Low et al., 1990; Gist, 1992; Chan et al., 1993; Brinn et al,1994; Pong and Whittington, 1994; Gist, 1994; Collier and Gregory, 1996; O'Sullivan, 1999; Menon and Williams, 2001; O'Sullivan and Diacon, 2002; Basioudis and Fifi, 2004; O'Keefe, 2004; Cameran, 2005; Mc Meeking, 2006; Mat Zain, 2007; O'Sullivan, 2009). The level of audit effort may be expected to increase due to the increased complexity of the audit task directly influencing audit fees. The complexity of audit clients is normally associated with the nature of their business, its location, the quality of internal controls, and the presence of unusual transactions. Measurements commonly used to represent complexity include the number of subsidiaries, the number of foreign subsidiaries, the proportion of foreign assets, the number of standard industrial classification (SIC) codes that apply to the business, the number of business segments, the number of audit locations, and a subjective rating of complexity provided by the audit team.

The number of subsidiaries is the measurement most commonly used in prior work (Hay et al., 2006). As discussed in Chan et al. (1993), there are certain reasons why a group of companies with many subsidiaries has to pay higher audit fees as compared to a single company of comparable size. First, more testing and audit effort is required to audit accounts across all subsidiaries, which involves a variety of statutory and disclosure requirements. In addition, if not all the subsidiary companies are audited by the same auditor, there may be some inquiry costs involved in obtaining information and this could increase audit cost. Besides, a group auditor should always pay particular attention to intra-group transactions, taxation implications of pricing policy and the existence of related party transactions, etc. Another point to stress is the importance of protecting the interests of minority shareholders in the case of the subsidiary company not being a wholly owned subsidiary. Finally, if the subsidiary companies operate in a variety of different fields, this could also complicate the auditing process since more substantial learning and expertise costs will be incurred by the auditor. Maher et al. (1992), Brinn et al. (1994),

Chan et al. (1993), Pong and Whittington (1994), Gist (1994a), O'Sullivan (1999), O'Sullivan (2000), O'Sullivan and Diacon (2002) and Basioudis and Fifi (2004) all found that the number of subsidiaries has a significant positive impact on audit fees in their sample of companies. This is supported by Hay (2012), who found a strongly significant positive association between number of subsidiaries and audit fees in his meta-analysis of audit fee literature published between 1980 and 2007.

In the UK, O'Sullivan (1999) emphasised the importance of segregating subsidiaries into foreign and local subsidiaries and his results show that foreign subsidiaries have a greater impact on audit fees as compared to local subsidiaries. O'Sullivan (2000) later further specified foreign subsidiaries as US subsidiary or other non-UK subsidiaries. The study found a significant positive relationship between all categories of subsidiary with audit fees. Consequently, some studies have found the proportion of foreign subsidiaries to total subsidiaries to be another important explanatory variable in explaining the complexity of client companies, leading to the auditor charging higher audit fees (Hay et al., 2006). The reason for this is that the existence of foreign subsidiaries is expected to increase the monitoring and control costs as different offices of the auditor firm, in different countries, take part in auditing the client (Chan et al., 1993).

The industry in which the client operates also determines the audit fees charged by an auditor as a common assertion made by auditors and researchers is that some industries are more difficult to audit than others (Simunic 1980; Turpen 1990; Pearson and Trompeter 1994). Financial institutions and utilities, which have relatively large assets, are generally easier to audit than manufacturing companies, for instance, which have extensive inventory, receivables or knowledge based assets (Hay et al., 2006). Another explanation could derive from the differing nature of regulation in different industries. Focusing on the insurance industry, O'Sullivan and Diacon (2002) find that insurers specializing either in life or general insurance pay significantly lower fees than their composite counterparts, suggesting that the audit of specialist insurers is less complex and consequently consumes less audit effort. In their study, Low et al.

(1990) concluded that there are significant improvements in the explanatory power of the audit fee model when industries are segmented into specific industrial models. The study found that complexity variables were only significant in the hotel industry. The two industries that have most frequently been singled out in audit fee research are financial institutions (eight studies) and utilities (15 studies) (Hay et al., 2006). Studies have typically found a reduced audit fee for companies operating in regulated industries (e.g. Ezzamel et al., 1996; O'Sullivan, 1999; O'Sullivan, 2000). Ezzamel et al. (1996) offer two possible explanations for this finding on lower audit fees among regulated firms. First, some of the regulated companies in their sub-sample were previously publicly owned and may have been subject to a different level and ethos of accountability, control and audit.Therefore, less risk is associated with them hence resulting in a lower audit fee. Second, the majority of regulated enterprises operate with a limited product range and usually on a national rather than an international basis so less effort is needed to audit the company as compared to a multinational manufacturer of a similar product.

As well as firm characteristics, the content and nature of financial statement items can add to the complexity of the audit. Thinggaard and Kiertzner (2008) argue that the nature of transactions, the accounting criteria for recognition and measurement, and the degree of judgment necessary regarding the potential importance of the outcome of future events may affect client complexity. In addition, the ratio of the sum of inventories and receivables to total assets is commonly used by researchers as a proxy for financial statement items that require more attention from the auditor. Early researchers such as Firth (1985) used this ratio to control for the complexity of audit clients. Using total inventories, debtors and internally generated intangible assets over assets as a proxy for financial statement items for which it is often difficult to obtain sufficient and appropriate audit evidence regarding possible material misstatement (labelled as complexity of substance), Thinggaard and Kiertzner (2008) found a significant positive relationship between complexity and audit fees. However, the study only found a significant effect for technical complexity (represented by the square root of the sum of subsidiaries and associated companies) among their small companies sample. The result implies that the

accounting technicality of consolidation has some weight in small companies but, in large companies, traditional considerations of inherent risk in relation to financial statement items are more important for the auditors, in line with audit theory of materiality and risk. In the Malaysian environment, Che Ahmad et al. (2006) also found that client complexity (proxied by total inventory and receivables to total assets) is positively and significantly related to audit fees. On the other hand, O'Sullivan (2000) used expenditure on research and development as one of his proxies for complexity. The study found that companies' expenditure on research and development has a positive impact on audit fees. The result is consistent with the argument that knowledge-based industries are likely to require more intensive auditing due to the larger proportion of intangible assets involved.

Other factors that can affect client complexity include the number of audit locations and the ratio of foreign to total assets. Gist (1992) used the number of audit locations visited by the auditor and the ratio of foreign to total assets to proxy for client complexity. Based on survey data from 95 public companies between 1983 and 1985 in the USA, the study found that the complexity of audit clients is significant in explaining variability of external audit fees. In the same year, Maher et al. (1992) also studied the effect of client complexity on audit fees, during a period of greater competition in USA as a result of deregulation of prohibition on client encroachment, client solicitation and advertising prohibition. He used additional measurements of client complexity which consisted of: two digit SIC codes, the number of subsidiaries, the ratio of foreign assets to total assets, the ratio of receivables to total assets and the ratio of inventory to total assets. He found a significant positive relationship between all these variables as proxies for client complexity and audit fees. Despite different definitions and the number of variables used to measure client complexity across prior literature, all the studies document empirical results indicating that the degree of client complexity significantly influences the audit fees charged by auditors. These findings support the argument that complex and diversified companies are charged higher audit fees as more audit labour, knowledge, and effort are needed to satisfactorily complete an audit assignment.

Audit Risk

During an audit of a client company the auditor is exposed to risk. Risk occurs when financial statements have been fraudulently prepared and include falsification of financial records, intentional omissions of transactions, misapplication of accounting principles and intentional omission of disclosures of financial information. As described in Zhao et al. (2006), there is a difference between audit failure and audit risk. Audit failure means that the auditor provides an incorrect audit opinion for unfaithful financial statements due to non-conformation to audit standards. Audit risk is the risk that the auditor may unknowingly fail to express the appropriate opinion on financial statements that are materially misstated. The main difference between audit failure and audit risk is whether or not the auditor conforms to audit standards. As mentioned in Wong (2009), results of a survey done by the Institute of Chartered Accountants in Australia in 2003 show that there has been a dramatic increase in the cost of insurance premiums purchased by audit firms to cover them against possible claims arising if they issue the wrong opinion. As these insurance costs are a significant expense for auditors, one way of compensating for this extra cost is by increasing audit fees to their audit client according to the degree of riskiness of the firm.

There are two forms of risk which are relevant to the auditor, business risk and audit risk. Business risk is defined as risk related to the business, which relates to the probability that an auditor will suffer financial or reputational loss in his professional practice as a result of lawsuits, sanctions imposed by external regulators, diminution of the auditor's professional reputation, possible loss of clients, time and costs incurred in defending the auditor's position and the non-realisation of audit fees (Jubb et al., 1996). Audit risk is defined as the risk that financial statements may be materially misstated after the audit is completed and an unqualified opinion issued (Arens and Loebbecke, 1994). The major components of business risk for audit firms arise from client specific audit risk. The higher the audit risk of the client company, the higher the business risk for the audit firm.

The relationship between audit fees and audit risk is described by Cameran (2005) as being much more complex than that between the other two attributes. Since higher audit risk means higher business risk for the audit firm, the auditor will try to provide for possible losses by charging extra fees to their client. Consequently, the higher the audit risk, the more testing needs to be carried out by the auditor and the higher the fees charged to compensate for the additional work and the greater the risk of audit failure (Brinn et al., 1994). Bell et al. (2001) found that high business risk increases the number of audit hours, but not the fee per hour. This implies that audit firms perceive firm-level differences in business risk and obtain compensation through billing additional hours, not by increasing the hourly charge. When considering inherent risk, profitability and leverage are among the common examples of audit risk. Generally, inherent risk is measured based on accounting information and also based on market risk measures. Using accounting information, the riskiness of a business is determined by the value of inventory to total assets ratio, receivables over total assets, inventory and receivable over total assets and current ratios. Simunic (1980) was the first to recognise inventory and receivables as "risky" balance sheet items that generally represent a material portion of the balance sheet figure and could lead to an increase in the level of audit effort and at the higher risk of a material misstatement of the items being missed by the auditor. However, it was argued by Jubb et al. (1996) that the use of these measures of risk is redundant with the proxy for complexity. This is because in the case of a more complex auditee, its operations are more dispersed and it may be harder for the auditee's central management to maintain adequate control over their inventories and receivables. Greater complexity leads to higher risk. Market risk, on the other hand, takes into account the systematic risk (i.e. market beta). Most of the earlier literature, such as studies by DeFond et al. (2000), Menon and Williams (2001), Nieme (2002) and Simunic and Stein (1996), used accounting information to determine risk. As compared to accounting based risk measures, market based measures are not widely used, despite possessing desirable properties such as being forward looking and not being affected by differences in accounting practices. In addition, the capital asset pricing model (CAPM) developed by Sharpe (1964), Lintner (1965) and Mossin (1966) suggests that the correct measure for the systematic risk of a firm is the beta. Motivated by this

proposition, Nikkinen and Sahlstrom (2003) investigated whether auditors across different environments actually access the systematic market risk in their audit pricing decisions. The results of the study reveal that the market based risk measure explains audit fees in addition to risk measures based on accounting information. However, the model differs among countries, which could be due to differences in cultural factors. Also, in using the market beta to measure risk, O'Sullivan (2000) found that the beta has a positive impact on audit fees. The result suggests that auditors charge a higher fee for auditing companies with greater stock market volatility as volatility can lead to a financial distress condition and subsequent investigation of the auditor's work. As a conclusion, the higher the inherent risk the higher the audit fees charged and, according to Hay (2006), 71% of audit fees studies from 1980-2003 reported a significant positive relationship between audit fees and various measures of inherent risk.

The profitability of a company can also be reflected in the riskiness of an audit. Client profitability reflects the extent to which an auditor may be exposed to loss in the event of a client not being financially viable and eventually failing (Simunic, 1980). The weaker the performance of the firm, the higher the risk for the auditor and the higher the audit fee expected to be charged (Van Caneghem, 2010). Loss by a client has become an increasingly important driver of audit fees in recent years (Hay et al, 2006), in addition to measures of profitability. It is expected that the audit fees will have a negative relationship with return on assets (ROA) and have a positive relationship with the presence of a loss. However, contrary to the above expectations, Nieme (2002) found that loss-making Finnish firms pay lower fees than their better performing counterparts. Nieme (2002) suggested this was due to the fact that the poor financial condition of a company might increase fee pressure and prevent the auditor from raising the audit fees.

Measures of leverage and liquidity may also be used to assess the risk of client failure, which potentially exposes the auditor to a loss (Simunic, 1980). Normally, leverage is used to measure long-term solvency and the liquidity ratios (current ratio and acid-test ratio) measure short term liquidity. It is expected that audit fees will have a positive relationship with leverage and a

negative relationship with the current and acid test ratios. However, Chaney et al. (2004) found a negative relationship between leverage and audit fees for a sample of privately held UK firms. It is argued that such a relationship is due to the stricter monitoring by lenders, which leads to lower audit fees for those companies with higher leverage levels. This is supported by Ang et al. (2000), who argue that as leverage increases, the risk of default also increases and this leads to more incentives for lenders to monitor the firm to avoid losses. Half of the studies included in the meta-analysis by Hay et al. (2006) showed a highly significant relationship between audit fees and leverage. Furthermore, based on a classification of studies by country, it is suggested that leverage is a more important determinant of audit fees in the United States and in the United Kingdom than in other countries.

It is suggested by Houston et al. (2005) that business risk is composed of at least three factors (acceptable audit risk, residual litigation risk and non-litigation risk) and that auditors are compensated to act as auditors, provide insurance for investor losses and bear risks associated with factors that extend beyond the conducting of the audit. Bedard et al. (2008) examined the association between audit fees and disclosure regarding effectiveness of internal control under section 302 of the Sarbanes Oxley Act 2002. Despite the fact that auditors are not required to evaluate internal controls under section 302, they found that companies disclosing problems under this section pay higher audit fees and continue paying higher audit fees in the following year. This is supported in a study by Hoitash et al. (2008), who found that audit fees were positively associated with internal control problems disclosed in the first year of implementation of section 404 of the Sarbanes Oxley Act 2002. These two studies provide detailed insights into audit risk adjustment during the initial period of SOX implementation. In an investigation of whether the association between financial reporting risk and audit fees changed during a period marked by momentous and historic events for auditors in the wake of the Enron scandal, Charles et al. (2010) found that the positive relationship between financial reporting risk and audit fees strengthened significantly in 2002 and 2003, consistent with a shift in the way auditors priced risk, in response to the events surrounding the Sarbanes-Oxley Act of 2002. Companies experiencing

restatements are normally assessed by the auditor as having higher audit risk than those with no financial problems. Using data from 228 US companies that had financial restatements for 2003, Feldman (2009) investigated this matter and also investigated whether subsequent remedial actions moderate the increase in audit price resulting from the higher audit risk. The study found evidence that audit fees are higher for restatement firms, compared with a matched-pair control group of non-restatement firms. Recently, Doogar et al. (2010) studied the transition effect to the new Auditing Standard (from Auditing Standard No 2 (AS2) to Auditing Standard No 5 (AS5)) in the US, using data from the years 2005 to 2008. It was found that AS5 audit fees are aligned with auditee fraud risk but AS2 audit fees are not; hence, AS5 audit fees are greater for those clients with higher fraud risk.

Initial Public Offerings (IPOs) can also lead to higher audit risk. There is a possibility of opportunistic earning management by issuers in an attempt to increase the offering price. It was found by Venkataraman et al. (2008) that auditors earn higher fees for IPO engagements than post-IPO engagements. The wedge between control rights and cash flow rights arising from the presence of a dual-class share structure also could increase audit risk. Dual class shares exist in firms having two or more classes of shares, with disproportionate voting rights. It was found by Khalil et al. (2008) that audit fees and the wedge between cash flow rights and control rights have a significant positive relationship. This is due to the wider scope of such audits, since auditors perceive a higher level of business risk in this kind of organisation.

Another factor that could play a crucial role in determining the auditor's legal liability is the legal environment. This prompted Choi et al. (2009b) to conduct a study of the effect of cross listing on audit fees based on the three following predictions. First, auditors charge higher fees for firms that are cross-listed in stronger legal regimes than for non-listed firms. Second, when firms are cross-listed in countries whose legal regimes are no stronger than those of their home countries, the cross-listing premium exists if and only if cross-listing leads to a significant increase in audit complexity. The third prediction is that for the firms cross-listed in stronger legal regimes, the cross listing audit fees premium

increases (decreases) as the difference in the strength of the legal regimes between the cross-listed foreign country and the home country becomes larger (smaller). The subsequent empirical analysis supported the first and third predictions only. The conclusion from this study is that cross-listing audit premiums are associated with increased legal liability. Using data from 21,559 firms across 15 countries between 1996 and 2002, Choi et al. (2008) found that the strictness of a country's legal liability regime is an important fee-increasing factor after controlling for the client firm-specific fee determinants and other factors, such as macroeconomic variables. The other findings include the existence of a Big 4 audit fee premium at a particular legal liability as the Big 4 charge higher audit fees as compared to non-Big 4 firms; however, the Big 4 premium decreases as the country's legal liability regime becomes stronger. They also found that the effect of legal regime on audit pricing and Big 4 premiums is more salient for small and medium-sized firms than for large firms. Finally, Choi et al. (2008) also found that the marginal effects of most firm-specific fee determinants on audit fees differ systematically between countries with stronger legal regimes and countries with weaker legal regimes, suggesting that the strictness of legal liability regimes is an important factor in explaining variations in audit fee structure across countries with different legal environments.

These findings are supported by Chan et al. (2008), who found that the increase in audit fees among large foreign accelerated filers is negatively associated with the strength of the legal environment in their home countries, implying that auditors charge higher audit fees to compensate for the higher audit risk associated with weaker legal environments. Laux and Newman (2010) developed a theoretical model to shed some light on the implications of the legal liability environment for the auditor's decision to accept or reject risky clients and the level of audit quality and audit fees in a setting in which the auditor expends considerable resources on evaluating the prospective client prior to making the acceptance decision. The main finding is that the relationship between the strictness of the legal regime and the probability of client rejection is U-shaped (rejection is higher for both weak and strong liability regimes as compared to those with moderate liability regimes). It was also found that both

audit quality and audit fees increase as the auditor's expected litigation loss from audit failures increases.

Krishnan et al. (2009) studied the possibility that a company's earnings forecast policy is associated with audit fees. It is argued that auditors view clients that make earnings forecasts as being associated with greater risk of earnings management and litigation. Consistent with this argument, the study found that companies issuing a greater number of earnings forecasts in a particular year, making more precise forecasts and management earnings forecasts which are more optimistically biased, pay higher audit fees.

Auditor Size

It is widely hypothesized that large audit firms demand higher fees (Cameran, 2005) and this could be due to the level of audit quality (DeAngelo, 1981), risk factors due to higher exposure to litigation risk if the client company should fail since bigger audit firms are perceived to be more wealthy (Mishari, 2008) and to possess stronger brands, or due to their market power (Basioudis and Fifi, 2004). However, contrary to the above assumptions, in a study among private firms, it was found that auditees, on average, do not view Big 5 auditors as sufficiently superior in terms of the perceived quality of the services provided to warrant a fee premium (Chaney et al., 2004).

Results from several studies in many countries support the positive association between audit fees and big audit firms (Taffler and Ramalinggam, 1982, Francis, 1984, Francis and Stokes, 1986, Chan et al., 1993, Anderson and Zéghal, 1994, Pong and Whittington, 1994, Wang et al., 2009). However, some studies in USA, Canada and UK have found no significant difference between fees paid to big audit firms and non-big firms (Simunic, 1980; Brinn et al., 1994). Even though the above studies show mixed results, combined results from 25 years of audit fee studies show a strong association between Big 8/6/5/4 firms and audit fees, with 58% of studies finding a significant positive relationship (Hay et al., 2006). In his latest meta-analysis study, Hay (2012) found strong evidence that big audit firms are associated with higher audit fees. While the majority of previous studies have found a strong significant positive relationship between

audit fees and Big audit firms, some authors believe that the relationship between the two variables should actually be negative (Cameran, 2005). The rationale behind this is that a negative relationship between audit fees and auditor size can be explained by the expected presence of greater economies of scale in the costs of the larger auditors (Palmrose, 1986).

Some authors have investigated this positive result further and found that the relationship differs between small and large auditee markets (e.g. Carson et al., 2004). Studies from the early to mid-1980s (Simunic, 1980; Simon, 1986; Francis and Stokes, 1986; Palmrose, 1986) found that auditor size is not significant for very large companies with assets of over $600 million. For relatively small companies with mean assets less than $100 million, auditor size has a positive relationship with audit fees (Francis, 1984; Francis and Stokes, 1986; Palmrose, 1986; Francis and Simon, 1987; Lee, 1996; McMeeking et al., 2006). One possible explanation for this result is that economies of scale offset the price premium for Big auditors in the large client segment (Francis and Stokes, 1986) and the positive relationship among smaller clients reflects the effect of product differentiation of the auditor rather than the abuse of monopoly power (McMeeking et al, 2006). However, recent studies from the 1990s and 2000s have found evidence that a Big 6 audit fee premium does exist among listed companies and larger audit clients (Johnson et al., 1995; Gul, 1999; Ireland and Lennox, 2002).

Some published literature has studied the effect of big audit firm premium in different audit market segments. Nieme (2004) examined the effect of auditor size among small Finnish audit firms. The results suggest that both size and technical capability have a positive impact on auditor remuneration. Earlier studies in Australia (e.g. Francis and Stokes, 1986), based on the large company segment, observed no significant differences between large and small audit firms, while in the small company segment, Big 8 firms charged significantly higher audit fees than non-Big 8 firms. This result is similar to the findings of Brinn et al. (1994), who studied big audit firm premiums in the UK. In the US, Palmrose (1986) and Francis and Simon (1987) have also reported the existence of a Big 8 audit firm premium with respect to smaller companies. Lee (1996)

found that in Hong Kong Big 6 firms charge higher audit fees in the small auditee market than in the big auditee market. Gul (1999) found that audit fees for Big 6 firms are higher than for non-Big 6 firms, among both larger and smaller auditees in the Hong Kong audit market. In the 2000s, Sullivan (2002) found that following the mergers in the UK of Big 8 to Big 6, there was evidence of reduced marginal costs for auditing large clients as measured by patterns of client switches following the mergers and no evidence that mergers were anticompetitive. Reynolds and Francis (2001), however, found no evidence that Big 5 auditors report more favourably for larger clients. Ireland and Lennox (2002) found evidence of a premium being charged by large audit firms in the United Kingdom, after modelling the selection of a large auditor by larger clients. In a different environment, Basioudis and Fifi (2004) found a significant relationship between size of business and audit fees for companies listed on the Jakarta Stock Exchange in 2000.

Using data on UK listed firms collected over a longer period (1985-2002), McMeeking et al. (2006) found that, based on partitioning of the sample by client size, big firm returns are more significant in the small client sector due to product differentiation. In investigating whether the Enron-Andersen affair in the US had affected audit fees, Chi (2006) found evidence of higher fees for Big 4 industry specialists relative to non-specialist auditors but the result only applies when the client is a small company. Abidin et al. (2010) studied audit market structure, fees and choices in a period of structural change (1998-2003) in the UK and found that there has been significant upward pressure on audit fees since 2001 for smaller audit clients. In Greece, Owusu-Ansah et al. (2010) studied the determinants of corporate audit fees following the liberalization of the statutory audit market in the country. They found that size of the auditee and particular hours spent on the audit engagement have a positive and significant influence on the audit fees charged by the auditor. Lawrence et al. (2011) examined whether differences in proxies for audit quality between Big 4 and non-Big 4 could be a reflection of their respective clients' characteristics. The study found that the effects of Big 4 auditors are insignificantly different from those of non-Big 4 auditors with respect to the three audit-quality proxies, thus suggesting that differences in these proxies between Big 4 and non-Big 4

auditors largely reflect client characteristics, especially client size. A number of studies have divided the audit market into second tier and local or regional firms. In the US, Francis and Simon (1987) found a significant Big 8 audit premium in both second tier national firms and local or regional firms. Similar results are also observed in the UK market by Basiodis (2002).

Some studies have attempted to relate individual large accounting firms to the existence of an audit fee premium (Balachandran and Simon, 1993; Anderson and Zéghal, 1994; Simon, 1995; Firth, 1997; Langendijk, 1997; Simon and Taylor, 2002). Firth (1997) reported that in general no Big 6 audit firm premium applied in Norway as only Arthur Andersen accrued a premium. According to Langendijk (1997), the Big 6 audit fee premium in the Netherlands is related to KPMG. Simon and Taylor (2002) later reported a big audit firm fee premium in Ireland, whilst further analysis revealed that the premium applied only to Price Waterhouse and Coopers and Lybrand. Investigating the relationship between audit fees and large audit firms in Italy, Cameran (2005) found that Italian auditees pay more in order to engage a big audit firm. Further testing shows that there are intra-Big audit fee differences and that the audit fee premium applies to only one large international firm (KPMG) rather than to all large audit firms as a group. In addition to auditor size, the size of a local branch office within an audit firm could determine the audit quality and audit fees. In this respect, Choi et al. (2010) found that office size has a significantly positive relationship with both audit quality and audit fees, even after controlling for national-level audit firm size and office-level industry expertise.

Auditor Location

Location of the auditor may have a significant impact on audit fees. The first issue relating to location is geographical proximity. There are two possible effects of auditor locality on audit fees. The first is that since geographic proximity and familiarity facilitate information flow (Malloy, 2005; Francis et al., 1999), the lowered information asymmetry between auditors and clients may reduce audit risk and audit cost. These cost savings would allow local auditors to charge lower audit fees. On the other hand, the information advantage and the more effective communication channels that local auditors enjoy compared to

non-local auditors may lead to more effective monitoring, and thus, higher-quality audits by local auditors. Higher audit quality could lead to the auditor charging higher audit fees (Choi et al., 2008). Utilising data from 10,587 firms between 2002 and 2005 in the USA, Choi et al. (2008) investigated whether and how the locality of auditors or the geographical proximity between auditors and clients affects audit quality and audit pricing. It was found that clients of local auditors report significantly fewer abnormal accruals than clients of non-local auditors and the audit fees paid to local auditors are lower than those paid to non-local auditors. This suggests that the cost savings associated with local audits are sufficiently large to outweigh potential fee premiums for high quality local audits.

The other issue relating to location is the address of the audit firm itself. The measurement commonly used to measure auditor location in metropolitan centres, for example, London (UK), Amsterdam (Netherlands) or Oslo (Norway) (Hay et al, 2006), is a dummy variable for auditor location. In the UK, Chan et al. (1993), Ezzamel et al (1996), O'Sullivan (2000) and Chaney et al. (2004) found a significant positive relationship between audit fees and whether the auditor was based in London. Hay (2012) found that audit pricing studies that have used this measurement, especially those conducted in the UK, show a very consistent positive relationship with audit fee; therefore, he considers this variable highly applicable to studies conducted in other countries, such as the US and Australia.

Report Lag

Report lag is the elapsed time between the audit client's financial year-end date and when the audit report is signed off. It is sometimes interpreted as an indication of the efficiency of an audit. A shorter time taken to audit could imply greater efficiency of the auditor. On the other hand, the longer time taken is likely to be because of the need for more audit testing and investigation. It is predicted that audit fees will have a positive relationship with report lag (Hay et al., 2006). In the UK, Chan et al. (1993), Ezzamel et al. (1996) and O'Sullivan (2000) found a significant positive relationship between audit fees and the lag between the year end and the date of the audit report. However, O'Sullivan

(1999) found no significant evidence that report lag has an effect on audit fees. To extend the understanding about the determinants of audit report lag, Knechel and Payne (2001) examined previously uninvestigated audit firm factors that potentially influence audit report lag. Their results indicate that incremental audit effort, the presence of contentious tax issues, and the use of less experienced audit staff are positively correlated with audit report lag. However, audit report lag is decreased by the potential synergistic relationship between non-audit services and audit services.

Busy Season

It is predicted that auditing during the auditing busy season (normally at the beginning of the calendar year) could lead to higher audit fees. However, O'Sullivan (1999) and O'Sullivan (2000) found no evidence that auditing during the busy season has a significant impact on audit fees. This is supported by Hay et al. (2006), who found that of 32 studies between 1980 and 2003 that examined the relationship between audit fees and busy season, only 5 reported a significant positive relationship, 2 negative and the rest reported insignificant results. Although the evidence to support that busy season audits are more costly is quite mixed, Hay (2012) concluded that the variable is significantly and positively associated with audit fees and such a measure should be included in further studies.

4.9 Chapter Summary

The first part of this chapter provided a rich discussion on various internal governance characteristics and their importance. Also discussed was the relationship between governance characteristics and audit pricing previously investigated by prior studies. However, the limited availability of contemporary studies relating corporate governance with audit pricing was also pointed out. The discussion then turned to the development of 17 hypotheses for assessing the relationship between governance characteristics and audit fees.

The second part of the chapter discussed the developments that have taken place in relation to non-audit fees, particularly since the recent increase in concern among various parties regarding independence of the auditor in dealing with

pressure imposed by management, especially in those companies having financial difficulties. These concerns have resulted in additional restrictions on the provision of non-audit services by auditors to their audit clients and also the publication of new accounting regulations and guidelines on procedures and disclosure for non-audit services. The new requirements to disclose details of non-audit services in financial statements provided a valuable opportunity for this study to investigate further the relationship between non-audit fees and audit fees and to assess the impact on audit pricing of each service individually rather than having to bundle them together as was previously the case due to data limitations. Five hypotheses were developed to test the relationship between non-audit fees and audit fees. The study does not test all the non-audit services individually as services such as audit of pension fund, SOX related services, other services related to pension fund, and IT and actuarial related services are too small in value and as percentages of total non-audit services to be considered important.

Chapter 5: Research Methodology

5.1 Introduction

The objective of this chapter is to provide details of the research strategy, data collection and the research design used. First, the research methods used in the study are discussed in detail and justified. Second, the data used in the study and the method of collection are provided, summarised in a table and explained in the text. This is followed by details of the samples used, including sample size and details of firms by Industry Classification Benchmark (ICB) industrial sector. The means used to measure the dependent variable (LOGAUDIT) and various audit fee determinants covering board characteristics, audit committee characteristics and ownership structure are shown. The discussion of the research design comprises an explanation of the control variables, including measurement procedure and the expected relationship for each independent and control variable. Where possible, variables and their respective measurements are supported by past literature. Finally, the regression models, which are basically an extension of Simunic's (1980) audit pricing model, are presented.

5.2 Research Methodology

Past studies have identified two main research strategies, namely quantitative and qualitative methods (Saunders et al, 2007; Bryman and Bell, 2003). However, some authors (e.g. Craswell, 2003; Tashakkori and Teddlie, 2003) have referred to a third approach, the mixed method, which is a combination of the quantitative and qualitative approaches. Research strategy refers to the method of data collection and analysis adopted in the study.

Quantitative research strategy favours a positivist epistemological orientation (Bryman and Bell, 2003; Hennink et al., 2011). In short the quantitative research approach involves quantifying a research problem, measuring and counting issues and then to generalising the findings to a broader population (Hennink et al., 2011). It employs scientific methods of identifying the research question and sampling technique, with a strong theoretical framework. Questions developed under this strategy are expressed in terms of hypotheses and estimation models in the form of derived equations with which to test the hypotheses. The

hypotheses normally are tested using mathematical equations, statistical analyses and econometric measurements. This method is also known as a "deductive" approach to research. The data are normally collected using semi-structured questionnaires or publicly available primary and secondary data**.** The outcomes of a quantitative research normally lead to the identification of statistical trends, patterns, averages, frequencies or correlations (Hennink et al., 2011).

One advantage of using quantitative research strategy is that it allows the establishment of causal relationships between variables and provides important insights into the interrelationships that could exist between very many variables of interest and enhances the understating of their links (Bryman and Bell, 2003; Vanderstoep and Johnston, 2009). As this method involves strict definition of terms and measurement of variables of interest it allows the researcher to measure what he sets out to measure and not another phenomenon. In addition, the approach allows generalisation and replication of results and may improve study validity and originality since mathematical and statistical tools used in this method enhance the ability to make inferences and forecasts.

However, there are a few drawbacks of using this method. Adelopo (2010) explore the limitation of this research method. First, the method has the difficulty in finding suitable variables to capture the concepts of the study. This is because the use of proxy variables for unobservable concepts is not equivalent to measuring the actual variable itself. Wrong model specification such as the exclusion of important variables, inclusion of irrelevant variables and measurement errors either for the dependent or independent variables is another common problem. Therefore, he concludes that the idea of using a proxy may limit the impact of the established relationship and may cast doubt on the validity of the result from such a study. This is because elements of subjectivity are involved in determining the proxy or surrogate variables. These leave room for wide variations in the choice of variables and their measurements and may account for numerous inconsistencies in a number of quantitative studies. Finally, the measurement validity and the choice of estimation techniques, model specification issues and statistical tests conducted may be inappropriate.

Second, this research strategy have been criticized by interpretivists on the grounds that it assumes that social sciences, whose primary focus is humans and their social involvements, can be subjected to the same or similar methods of analysis as the pure sciences.

On the other hand, qualitative research is guided by concepts from the interpretive paradigm (Hennink et al., 2011). Therefore, an inductive research approach where research questions lead to the formulation of theory and the discovery of a pattern of behavior is preferred. Also, the values and perceptions of the researcher are inevitably linked to the research itself. Qualitative research is described by Hennink et al. (2011) as an approach that allows an examination of people's experiences in detail, by the use of a specific set of research methods such as in-dept interview, focus group discussion, observations, content analysis, visual methods, and life histories or biographies. In short, it uses the strategy that captures the social dynamics of business, its internal constituents, environments and stakeholders. This research strategy involves the use of data collection and analysis methods that are considered to be most suitable for investigating a social actor in a social setting. In other words, human dynamics are recognised in every stage of the research process (Adelopo, 2010).

The key benefit of this method is the ability to explore and undertake an in depth investigation of a social actor or phenomenon, therefore providing the opportunity to make meaning of both spoken and unspoken responses, which enables firsthand experience and interaction with the subject of the investigation. For example, technique such as interviews and focus groups allow the participant of the research to give a very detailed and specific answer (Vanderstoep and Johnston, 2009). It is perhaps the closest representation of reality. The inductive research approach also can be the pivot to the emergence of a grounded theory, providing a more original insight is there.

However, this approach has generalisability and replicatability problems considering no two individuals are the same in terms of feeling, emotional make up and other individual uniqueness. In addition, the sample sizes are normally small and non-random, and therefore the findings may not be generalised to the larger population (Vanderstoep and Johnston, 2009). Another problem is the

possibility of bias arising from the researcher's own values, culture and perceptions. Inductive research method involves direct contact with people of various ages and circumstances so the issues of consent, vulnerability and participation might be another problem to be addressed.

The nature of the study itself is a very important determinant in choosing the most suitable research method (Saunders et al, 2007). For studying certain issues quantitative strategy is more appropriate; for example, in the case of collecting data from senior management on corporate strategy or governance processes, which is considered sensitive information. Such data could have been reliably collected by previous research or could be publicly available through government departments or agencies or through private providers and there is no point in reinventing the wheel so long as the data is reliable and free from error and bias. Constraints such as time and finance could also determine the research method. Therefore, readily available secondary or published data are preferred by most researchers due to considerations of time and cost effectiveness.

Based on these facts, this study uses a positivist epistemological stance with a deductive approach, using only a quantitative research strategy. These philosophical and strategic research choices are based on the nature of the investigation as well as the fact that quantitative method is more cost effective and less time consuming as compared to qualitatitive research strategy. Therefore, the data collected for this study derives from published (the companies' annual reports) and secondary data (datastream).

5.3 Data Collection

Most of the data used in this study were obtained from the companies' annual reports for the years 2007 and 2010. The year 2007 is chosen to represent pre economic crisis period because, a recent report (Bank of England, 2009) indicates that the economic crisis started in 2008 in UK with UK real GDP fell by 5.5% between 2008 quarter 1 and 2009 quarter 2 (Bank of England, 2009). From early 2010 world economic recovery stabilised, the situation on the global financial markets calmed down and crisis measures started to be withdrawn (Berg, 2012). Therefore, the year 2010 is used to represent post crisis period. The required annual reports were downloaded from the individual company's

website and the filings section of *Thomson One Banker*. Most of the data were hand collected from companies' annual reports. The data were divided into three categories: audit data, governance data and financial data. In order to obtain the necessary information, various sections of the annual reports were utilised. Audit fee and non-audit fee data were collected from the notes to the accounts listing details of the remuneration paid to the company's auditor. Almost all companies involved in the study disclosed this information in the notes to the accounts for operating expenses or operating profit. To comply with the requirements of The Companies Regulations 2005, most of the companies disclosed details of audit and non-audit fees paid to their auditor. This enabled the relationship between audit fees and the individual components of non-audit fees to be studied. The details of other audit data, such as the name of the auditor, audit report date, type of opinion received and location of the auditor, were obtained from the independent auditors' report section of the annual report.

Governance data were collected from annual reports, in particular, the corporate governance section. Board of directors' profiles, remuneration reports, governance statements, directors' reports and audit committee reports were analysed in order to obtain relevant governance information. The number of directors on the board and also the number of non-executive directors was calculated using the names disclosed in the board of directors' profile, excluding those who retired before the year end and also those appointed after the year end. The names of the directors in the directors' remuneration statement were then crosschecked with those in the governance section of the annual report, which normally states the number of directors and also any change of directors during the year. Further analysis of the governance statements was done to determine which non-executive directors were in fact independent of management. Most of the companies stated clearly which directors were considered independent based on the code of corporate governance. Information on CEO duality was another item of data collected from the board of directors' profile. CEO duality exists when the chairman of the board and Chief Executive Officer position is held by the same person. The number of audit committee members and the expertise possessed by each member was collected from the audit committee report.

In order to collect information on board meetings and audit committee meetings, the corporate governance report and sometimes the report of the audit committee were checked. Most companies provided tables giving details of the attendance of each member at board meetings and also committee meetings such as audit committee meetings, nomination meetings and remuneration meetings. In the absence of such a table, detailed reading of the corporate governance report enabled the necessary information to be collected. Ownership information is also related to corporate governance. Thus, the remuneration report was utilised to determine the number of executive and non-executive directors holding ordinary shares in the company. Most companies provided a table showing the share ownership of the board. Care was taken not to include in the ownership of the board the board members who had retired during the year In relation to ownership, blockholder information was obtained from the directors' report under the significant share ownership section as the companies are obliged to disclose the shareholders holding 3% or more of their shares.

Financial data for the study were obtained from *Datastream*. In cases where figures were missing from the *Datastream* database, the companies' financial statements were checked to obtain the missing data. Table 5.1 below summarises how the data were collected and the sources of the information.

Table 5.1 Data Collection and Sources of Information

Type of data	**Source**
Audit fee data	
Audit fees and Non-audit fees	Notes to the financial statements under operating expenses or operating profit headings.
Other audit data	
Report Lag, Auditor Location and Auditor size.	Annual report - Independent auditors' report (Group)
Governance data	
Board data	Board of directors' profile, corporate governance statement, remuneration report.
Audit committee data	Audit committee report, corporate governance statement
Other data	
Directors' ownership	Annual report
Blockholders' ownership	Annual report
Subsidiaries	Annual report

Industry classification	FTSE websites
Financial data	Datastream and annual reports.

5.3 Sample Selection

The population of the study consists of all companies listed on the FTSE All Share (UK) as at 31st December 2007, information which is available on the FTSE website. Table 5.2 shows details of the sample companies. The initial number of companies was 672, including investment companies. However, investment companies were subsequently excluded as they are typically holding companies, producing no goods and services but rather holding investments (or shares) in other companies. This reduced the sample to 568 companies. Due to outliers and other data restrictions, mainly relating to problems in obtaining copies of some companies' annual reports, the number of companies was reduced to 492. The companies which were no longer listed in the London Stock Exchange and also those that had moved to an AIM listing in 2010 were then taken out, leaving the final sample of 384 companies. Total observations for the two years is 768.

Unlike most prior audit pricing studies, this study includes financial institutions. In the UK, all the prior audit pricing studies into the relationship between governance characteristics and audit fees (e.g. O'Sullivan 2000; Peel and Clatworthy, 2001; Adelopo and Jallow, 2008; Adelopo et al., 2009) have excluded financial companies, while O'Sullivan and Diacon (2002) included Insurance companies only. The rationale behind the inclusion of financial companies in this study is that the recent economic crisis and the collapse of banks and financial institutions have increased interest and concern regarding the governance of financial institutions so it was felt important to include these companies in the sample, especially as they have not been investigated previously. Reasons commonly cited for the exclusion of this industry from audit pricing literature are that the financial reporting format of Banks and Financial Institutions is different from those of other types of companies and that they operate in a regulated industry.

Table 5.3 shows the sample firms categorised by Industry Classification Benchmark (ICB) industry sector. The sample firms are distributed among ten

main industries, consisting of general industries such as oil and gas, basic materials, industrials, consumer goods, health care, consumer services, telecommunications, technology and also regulated industries like utilities and financials. The majority of the firms are drawn from three main sectors, namely, industrial, consumer services and financial, represented by 105 companies (27.3%), 81 companies (21.1%) and 71 companies (18.7%) respectively. The remaining companies were listed in other industries, with 16 companies (4.2%) listed in oil and gas, 22 companies (5.7%) in basic materials, 34 companies (8.8%) in consumer goods, 15 companies (3.9%) in healthcare, 7 companies (1.8%) in telecommunications, 9 (2.3%) in utilities industries and 24 companies (5.7%) in technology industries. When combined, firms in the regulated industries constitute 21% of the total, which is considered quite significant.

Table 5.2: Sample Firms

	No of companies
Initial sample from FTSE All Shares listed on 31/12/2007	672
Investment holdings	110
Outliers	6
Unavailability of Annual Report and some financial data	64
FTSE all shares drop out in 2010	108
Final sample	384

Table 5.3: Firms by ICB Industry sector

Industry	No of companies	percentage
Oil & Gas	16	4.2
Basic Materials	22	5.7
Industrials	105	27.3
Consumer Goods	34	8.8
Health Care	15	3.9
Consumer Services	81	21.1
Telecommunications	7	1.8
Utilities	9	2.3
Financials (excluding Investment Holdings)	71	18.7
Technology	24	5.7
Total	384	100

5.4 Research Design and Measurement Procedures

The first objective of the study is to test the relationship between the internal governance characteristics of sample companies and audit quality. Although potentially many aspects of internal governance can be considered, this study focuses on the impact of characteristics of the board of directors, audit committee and ownership structure on audit quality as proxied by audit fees. This study uses audit fee as the dependent variable. O'Sullivan (2000) provides three justifications for the use of the audit fee as a proxy for audit quality. The first justification is that audit fees reflect the extent of auditor investigation and quality of staff used by the auditor. Second, existing audit pricing studies acknowledge the link between audit quality and pricing by including a binary variable to represent auditor type, with the expectation that big audit firms have better quality auditors and charge an audit fee premium to reflect this (e.g. Chan et al., 1993; Wang et al., 2009). Third, O'Sullivan (2000) stressed that the link between audit quality and fees has been raised both by Cadbury (1992) and the Chartered Accountants' Joint Ethics Committee (1993) report, warning of the likelihood that audit quality may be compromised by low fees.

5.4.1 Measurement for Independent Variables

Board Independence

Board independence is a continuous variable measured by the proportion of non-executives on the board of directors. Prior studies in the US (Carcello et al., 2002; Lee at al., 2004; Boo and Sharma, 2008) and in the UK (O'Sullivan, 1999; O'Sullivan 2000; Peel and Clatworthy, 2001; Adelopo and Jallow, 2008) have used the same variable to test the extent of board independence. It is expected that the proportion of non-executive directors on the board will affect audit fees as non-executive directors will be more concerned with the accuracy of financial statements and thus higher quality audits will be required from the auditor, leading to higher audit fees.

In the wake of increasing concern regarding the independence of the board, this study also tests the independence of directors in terms of the proportion of independent non-executives on the board. This is in line with the requirement of

the Code of Corporate Governance that the board should have a balance of executive and non-executive directors (and specifically independent non-executive directors) such that no individual or small group of individuals can dominate the board's decision taking**.** The Code clearly states that the board should identify in the annual report each non-executive director it considers to be independent. The board should determine whether the director is independent in character and judgment and whether there are relationships or circumstances which are likely to affect, or could appear to affect, the director's judgment. The board should state its reasons for classifying a director as independent, notwithstanding the existence of relationships or circumstances which may appear relevant to its determination. Generally the following factors affect the independence of non-executive directors (The UK Corporate Governance Code, 2010):

a. has been an employee of the company or group within the last five years;
b. has, or has had within the last three years, a material business relationship with the company, either directly or as a partner, shareholder, director or senior employee of a body that has such a relationship with the company;
c. has received or receives additional remuneration from the company apart from a director's fee, participates in the company's share option or a performance-related pay scheme, or is a member of the company's pension scheme;
d. has close family ties with any of the company's advisers, directors or senior employees;
e. holds cross-directorships or has significant links with other directors through involvement in other companies or bodies;
f. represents a significant shareholder; or
g. has served on the board for more than nine years from the date of their first election.

Utilising the data available regarding independent non-executive directors in the corporate governance section in the annual reports, this study investigates the relationship between independent non-executive directors and audit fees. Previous studies in the UK, US and Hong Kong, Greece and Malaysia

(O'Sullivan, 2000; Carcello et al., 2000; Tsui et al., 2001; Leventis and Dimitropoulos, 2010; Bliss et al., 2007; Bliss, 2011) found a significant positive relationship between audit fees and the proportion of non-executive directors. Therefore this study expect a positive relationship between audit fees and both measures of board independence.

CEO duality

CEO duality arises when the same individual occupies the positions of company chairman and CEO. This study use a Binary variable: = 1 if CEO is also Chairman of the Board and; = 0 otherwise to measure CEO duality. Prior researchers in the UK, such as O'Sullivan (1999), O'Sullivan (2000) and Peel and Clatworthy (2001), have included this variable in their studies as have researchers in Hong Kong, France and Spain (Tsui et al., 2001; Desender et al., 2009). Past studies have suggested that CEO duality constrains board independence and in presence of a dominant CEO, non-executive directors are expected to have reduced influence in seeking an intensive audit and as a result companies with CEO duality are more likely to have lower demand for external audit services (Bliss, 2011; Desender et al., 2009; O'Sullivan, 2000). Tsui et al. (2001) found a negative relationship between audit fees and CEO Duality. Therefore it is expected that the existence of CEO duality will have a negative impact on audit fees.

Board size

Board size is a continuous variable measured by the number of directors on the board. This measurement has been used by US studies (Boo and Sharma, 2008; Chan et al., 2012) and also previous UK studies (Adelopo and Jallow, 2008). It is therefore expected that board size will have a positive relationship with audit fees. This is because Chan et al. (2012) found a significant positive relationship betweent board size and audit fees.

Board diligence

Board diligence is a continuous variable measured by the number of board meetings held during the year. One of the requirements of Schedule C of the Combined Code 2006, dealing with the disclosure of corporate governance arrangements, is the disclosure of the number of meetings of the board and individual attendance by directors (A.1.2). A previous US study (Carcello et al., 2002) and a UK study (Zaman et al., 2011) have used this measurement and found a positive relationship between audit fees and board diligence. Therefore, it is expected that the number of board meetings will have a positive relationship with audit fees as diligent boards will demand higher quality audits, requiring more audit assurance and audit hours, which will lead to higher audit fees.

Board Expertise

Board expertise is a continuous variable measured by the Percentage of non-executive directors holding one or more other directorships in LSE listed companies. This is because prior research, particularly audit pricing studies, (e.g. Carcello et al., 2002) has typically based the measurement of board expertise on multiple directorships held by the directors. The use of this measurement is justified by Mace (1986), who suggests that outside directorships are perceived to be valuable because they provide executives with prestige, visibility and commercial contacts. O'Sullivan (1999), on the other hand, utilised number of other directorships because of its potential to reflect the market's perception of an individual non-executive's monitoring capability. Since the directors who hold multiple directorships would suffer more reputational damage if the company collapsed due to opportunistic financial reporting behaviour by management, they are expected to provide a higher quality monitoring service on behalf of shareholders. It is expected that the board expertise variable will have a positive relationship with audit fees. This is because expert boards will be more supportive of the purchase of higher quality audit services, resulting in higher audit fees.

5.4.2 Audit Committee Characteristics

Audit Committee Effectiveness

Many past studies have measured audit committee effectiveness using a composite variable consisting of audit committee independence and diligence variables. Lee and Mande (2005) found a positive association between audit fees and audit committee effectiveness in US listed companies. A year later, in an Australian study, Goodwin-Steward and Kent (2006) used three-way interaction between audit committee independence, expertise and meeting frequency. Although they found the interaction between these variables to be significant, they found that expertise is positively associated with audit fees only when meeting frequency and independence are low. This may reflect that an audit committee with accounting expertise demands a higher level of assurance in these circumstances. In Malaysia, Mat Zain and Subramaniam (2007) also used the form of interaction utilised by Goodwin-Steward and Kent (2006) and found a positive relationship between Internal audit contribution to financial statement audit and audit committee effectiveness. However, in New Zealand, Rainsbury et al. (2009) found no significant association between the quality of the audit committee and the quality of financial reporting. In the UK, drawing upon recommendations in the Smith Report (2003), Zaman et al. (2011) based their composite measure for audit committee effectiveness on the following 4 variables: size of the committee (at least 3 members), independence of the committee members (contains only non-executive directors), number of committee meetings (a minimum of 3 meetings per year) and existence of expertise on the committee (at least one finance expert on the committee). An audit committee is only considered effective if all four criteria are met. A dummy variable is used to indicate the fulfilling of this condition where Binary variable;= 1 if all audit committee members are non-executive directors, at least one member has relevant financial expertise, meet at least three times a year and having minimum size of three audit committee members;= 0 otherwise. Inspired by Zaman et al. (2011), this study uses the same method of measurement for audit fee effectiveness. Zaman et al. (2011) found a positive association between audit committee effectiveness and audit fees; and this study expects the same

finding as an effective audit committee will demand a higher quality audit from the incumbent auditor.

Audit Committee Independence.

Studies in the US and UK, including those of Abbott et al. (2009), Vafeas and Waegelein (2007) and Zaman et al. (2011), found that audit committee independence is positively associated with audit fee levels, consistent with the notion that audit committees serve as a complement to external auditors in monitoring management. Both Abbott et al. (2009) and Zaman et al. (2011) use a Binary variable; = 1 if all audit committee members are non-executive directors; = 0 otherwise. However, in contrast, Vafeas and Waegelein (2007) used a binary variable 1 to indicate the presence of at least one insider on the committee, =0 otherwise. This study uses a binary variable similar to that used by Abbott et al. (2009) and Zaman et al. (2011), namely, = 1 if all audit committee members are non-executive directors; = 0 otherwise. It is expected that audit committee independence will have a positive association with audit fees as directors who are independent of management will require a higher quality audit, which will lead to higher audit fees.

Audit Committee Size

Audit committee size is a continuous variable measured by the number of audit committee members. According to the Combined Code of Corporate Governance, Schedule C.3.1, the board should have an audit committee consisting of at least three or in the case of smaller companies two members, who should all be independent non-executive directors. Previous studies such as Pincus et al. (1989), Kalbers and Fogarty (1993), Vafeas and Waegelein (2007), Zaman et al. (2011) have used this measurement to measure audit committee size. It is expected that larger audit committees will demand higher quality audits, resulting in higher audit fees.

Audit Committee Expertise

Audit committee expertise is measured by three different measurements. First, audit committee overall financial expertise is measured by the number of audit

committee members with overall financial expertise as well as a dummy variable indicating instances where the audit committees fulfil the requirement of having a financial expert. The current SEC definition for financial expertise is used to measure the audit committee's financial expertise. Therefore, members with work experience as a certified public accountant, auditor, chief financial officer, financial comptroller or accounting officer and also those with work experience as an investment banker, financial analyst, or in any other financial management role and/or as a chief executive officer, chairman or company president are considered as having general financial expertise. This study expects a positive relationship between audit fees and the number of financial expert. This is because, having a larger number of directors with financial knowledge and experience (financial expert) on the audit committee may increase the committee's demand for higher quality audits which will lead to higher audit fees. This is supported by evidence from the US whixh suggests that financial expertise is positively associated with audit fees (e.g. Carcello et al., 2002; Abbott et al., 2003a)

The SEC definition of financial expert suggests that the term financial expertise could entail accounting and finance expertise, as well as any expertise in the preparation of financial statements. Therefore, the second measurement used is audit committee accounting expertise. It is again a continuous variable measured as the proportion of audit committee members with accounting expertise. The notion of accounting expertise is measured by using a strict definition proposed by the SEC and later used by Krishnan and Visvanathan (2008), Krishnan and Lee (2009) and Dhaliwal et al., (2010). The SEC defines the accounting expert as 'a member with experience as a certified public accountant (CPA), auditor, chief financial officer (CFO), chief financial controller or chief accounting officer'. The Audit committee non accounting expertise is also a continuous variable measured as the proportion of audit committee members with non-accounting expertise i.e. finance and supervisory expertise. This would include members with work experience as an investment banker, financial analyst, or experience of supervising the preparation of financial statements (e.g. chief executive officer or company president). Davidson et al. (2004) and DeFond et al. (2005) have used the same measurement to measure audit committee

supervisory expertise. The biographical data disclosed in the annual reports for members of the audit committee was perused to identify those serving on other audit committees and with financial expertise, i.e. accounting and non-accounting expertise. This study expects a positive relationship between audit fees and supervisory financial expert and negative relationship with accounting financial expert. This is supported by findings of Krishnan and Visvanathan (2009) and Hoitash and Hoitash (2009) who report that experts with supervisory experience demand a higher level of assurance in comparison to accounting experts as they do not have the necessary experience to understand complex accounting issues.

Audit Committee Diligence and Commitment

Audit committee diligence is a continuous variable measured by the number of or frequency of audit committee meetings held. Other studies that have used this measurement include Menon and Williams (1994), Carcello et al. (2002) , Hoitash and Hoitash (2009), Abbott et al.(2003a), Goodwin-Stewart and Kent (2006), Hoitash and Hoitash (2009) and Zaman et al.(2011). Prior studies (e.g Zaman et al., 2011; Abbott et al.2003a; Goodwin-Stewart and Kent,2006) found a positive relationship between audit committee meeting and audit fees. Therefore, this study anticipates that audit committee diligence will be associated with higher audit fees.

Audit committee commitment will be measured by the weighted average attendance of all audit committee members to audit committee meetings. As highly committed members indirectly promote efficiency and effectiveness of the committee, a positive association is expected between audit fees and the proportion of audit committee members who attended all meetings scheduled for the year.

5.4.3 Ownership Structure

The essence of ownership structure is captured using blockholder ownership, executive ownership and non-executive ownership. Blockholder ownership is measured by two different measurements. First, it is measured by the percentage of total shares held by substantial shareholders (holding 3% or more

shareholdings). This was previously used in Chan et al. (1993) and O'Sullivan (2000). The study also used the number of large shareholders (shareholders holding 3% shares or more) to measure blockholder ownership. This method was previously used by Adelopo et al. (2012). This study predicts a negative relationship between blockholder ownership and audit fees since past studies (e.g. Mitra et al., 2007 and Adelopo et al., 2012) also documented a negative relationship between audit fees and blockholder ownership.

The Executive or management ownership is a continuous variable measured by the proportion of shares held by directors (defined as proportioned of issued beneficial and non beneficial ordinary shares). This was previously used by O'Sullivan (2000), Mitra et al. (2007) and Vafeas and Waegelein (2007).

Non-executive director ownership is also a continuous variable and is measured by the percentage of total shares owned by non-executive directors (beneficial shares only) over total share capital. Studies such as Honeine and Swan (2010) and O'Sullivan (2000) have used the same measurement to measure non-executive director ownership. The information on ownership structure was collected by consulting the remuneration and directors report section of the annual report of each company. O'sullivan (2000) documented a negative relationship between both management share ownership and non-executive director ownership and audit fees. Therefore, this study also expects a negative relationship between management share ownership and non-executive director ownership and audit fees.

5.4.4 Control Variables

The study recognises other factors which might affect the amount of audit fees paid. Thus, a number of control variables consistent with prior literature are also identified and included in the model. Client attributes include company size, client complexity, riskiness and other attributes. Client size is measured by Log sales and Log total assets. Client complexity, on the other hand, is measured by total number of subsidiaries of the company, number of UK subsidiaries, number of Non-UK subsidiaries and number of US subsidiaries and USDUMMY (using binary variable;= 1 if the company has US subsidiary;= 0 otherwise). The riskiness of the client is controlled for by including variables such as proportion

of total assets represented by stock (stock/total assets), proportion of total assets represented by debtors (debtors/total assets), return on assets (earnings before interest and tax/total assets), leverage ratio (long term liabilities/total assets) and whether the company experienced loss during the year (using binary variable; =1 if the company experienced loss during the year; =0 otherwise). The client attribute of whether the company belongs to a regulated industry (financial and utilities) is also included. This is measured by binary variable; =1 if the company belongs to financial or utilities industry; =0 otherwise. Since this study also includes financial institutions, a binary variable; =1 if the company belongs to financial institutions; =0 otherwise is also used.

Auditor related attributes included in the study are auditor size and location of the auditor. Auditor size (BIG4) is measured by a Binary variable; =1 if auditor is Deloitte & Touche, Ernst & Young, KPMG or PricewaterhouseCoopers; =0 if otherwise. The location of the auditor labelled as LONDON is also measured by a binary variable; =1 if the auditor has a London address; =0 if otherwise.

Consistent with prior literature, attributes such as report lag labelled DELAY, which represents the elapsed time from the audit client's financial year-end date until the audit report is signed off, and whether the auditing is done during the busy season labelled BUSY are also included in the audit pricing model. The report lag is measured by the number of days between the accounting year end and the date of the audit report. The busy season, which is labelled as BUSY, is measured by a binary variable; =1 if the financial year end is between 31st December and 31st March; =0 otherwise. A list of variables used in this study and the methods of measurement used are shown in Table 4.4.

5.4.5 Non-Audit Fee

The study is also aimed at finding the association between non-audit fees and audit fees. First, Non-audit fees are measured by the natural log of the total amount of non-audit fees the company pays to its auditor. Theoretically the relationship between audit fees and non-audit fees is expected to be negative.

Second, this study unbundles the non-audit service. This study contributes significantly to the existing literature by investigating the relationship between

audit fees and details of non-audit services using published data. Previous research (Palmrose, 1988; Beattie and Fearnley, 2002; Ezzamel et al., 2002 and Lai and Krishnan, 2009) have unbundled the non-audit service using information from survey responses. In the Post-SOX period, the issue of non-audit fees and auditor independence has become controversial following a series of corporate collapses and this has triggered a demand for more detailed disclosures from regulators. One of the responses from the regulators was the establishment of the Companies (Disclosure of Auditor Remuneration and Liability Agreements) Regulations 2005. Under these regulations, UK companies are required to disclose details in the annual report of non-audit fees paid to their incumbent auditors. The availability of this data made possible investigation of the relationship between audit fees and individual non-audit fees. Although many individual non-audit services are disclosed in the annual report, some services are not very widely used and the values as a proportion of total non-audit fees are too small for meaningful study. For the purposes of this study, it was decided that it would be more practical to condense non-audit services into four categories: other services related to legislation, tax services, corporate finance services and other services (other services relates to pension plan, actuarial service, IT service and any other service). The other services related to legislation are measured using the percentage of other services related to legislation over total non-audit fee (other services related to legislation/total non-audit fee) x 100. Each of the other non-audit service categories is calculated in the same manner.

The study also measures non-audit using binary variable ;= 1 if total non-audit fees is greater than audit fees;=0 otherwise. This is to capture the relationship between audit fees and the incident where non-audit service is more dominant than audit service. Other measurements used include the percentage of total audit remuneration from non-audit fee.

5.5 Empirical Research Models and Tests

The study utilises four main empirical models to test the relationship between audit fees and governance characteristics.

5.5.1 Audit fees and Governance Model

Model 1

LogAUDIT = b0 + b1 LOGTOTASSETS+ b2 UKSUBS + b3 USSUBS + b4 ROA + b5 STOCK + b6 DEBTORS + b7 REG + b8 BUSY + b9 LOGDELAY + b10 LONDON + b11 BIG4 + b12 3YEARSLOSS + b13LOGTOTNONAUDIT + b14 %INDIRS + b15 BOARDMEET + b16ACSIZE + b17 % ACNEXEC+ b18 % ACMEET + b19 %ACCOMM + b20 %ACFINEXPERT+ b21 ABLOCKOWN+ b22 ANEXSHARES+ b23 AEXESHARES + b24 PERIOD

Model 2

LogAUDIT = b0 + b1 LOGTOTASSETS+ b2 UKSUBS + b3 USSUBS + b4 ROA + b5 STOCK + b6 DEBTORS + b7 REG + b8 BUSY + b9 LOGDELAY + b10 LONDON + b11 BIG4 + b12 3YEARSLOSS + b13LOGTOTNONAUDIT + b14 BOARDSIZE + b15 %INDIRS + b16 BOARDMEET + b17ACSIZE + b18%ACNEXEC + b19 %ACMEET + b20 %ACCOMM + b21%ACFINEXPERT + b22 ABLOCKOWN + b23 ANEXSHARES+ b24 AEXESHARES + b25 PERIOD

Model 3

LogAUDIT = b0 + b1 LOGTOTASSETS+ b2 UKSUBS + b3 USSUBS + b4 ROA + b5 STOCK + b6 DEBTORS + b7 REG + b8 BUSY + b9 LOGDELAY + b10 LONDON + b11 BIG4 + b12 3YEARSLOSS + b13LOGTOTNONAUDIT + b14 %INDIRS + b15 BOARDMEET + b16ACSIZE + b17 % ACNEXEC+ b18 % ACMEET + b19 %ACCOMM + b20 %ACSUEXPERT + b21% ACACCEXPERT + b22 ABLOCKOWN+ b23 ANEXSHARES+ b24 AEXESHARES + b25 PERIOD

Model 4

LogAUDIT = b0 + b1 LOGTOTASSETS+ b2 UKSUBS + b3 USSUBS + b4 ROA + b5 STOCK + b6 DEBTORS + b7 REG + b8 BUSY + b9 LOGDELAY + b10 LONDON + b11 BIG4 + b12 3YEARSLOSS + b13LOGTOTNONAUDIT + b14 %INDIRS + b15 BOARDMEET + b16 ACE + b17 ABLOCKOWN+ b18 ANEXSHARES+ b19 AEXESHARES + b20 PERIOD

In addition, this study presents various robustness tests of the impact of various governance characteristics and control variables on audit quality, utilising

different variations of variables of board characteristics, audit committee characteristics and ownership structure. This part of the analysis extends our understanding of the impact of these variations on audit quality.

5.5.2 Audit Fees and Non-Audit Fees

Model 1

LogAUDIT = b0 + b1 LOGTOTASSETS+ b2 UKSUBS + b3 USSUBS + b4 ROA + b5 STOCK + b6 DEBTORS + b7 REG + b8 BUSY + b9 LOGDELAY + b10 LONDON + b11 BIG4 + b12 3YEARSLOSS + b13 %INDIRS + b14 BOARDMEET + b15 ACSIZE + b16 % ACNEXEC+ b17 % ACMEET + b18 %ACCOMM + b19 %ACFINEXPERT+ b20 ABLOCKOWN+ b21 ANEXSHARES+ b22 AEXESHARES + b23 PERIOD + b24 LEGIST(M) + b23 TAX(M) + b23 CORPFIN(M) + b23 OTHERSERVICE

Model 2

LogAUDIT = b0 + b1 LOGTOTASSETS+ b2 UKSUBS + b3 USSUBS + b4 ROA + b5 STOCK + b6 DEBTORS + b7 REG + b8 BUSY + b9 LOGDELAY + b10 LONDON + b11 BIG4 + b12 3YEARSLOSS + b13 %INDIRS + b14 BOARDMEET + b15 ACSIZE + b16 % ACNEXEC+ b17 % ACMEET + b18 %ACCOMM + b19 %ACFINEXPERT+ b20 ABLOCKOWN+ b21 ANEXSHARES+ b22 AEXESHARES + b23 PERIOD + b24 AUDITVSNON

5.6 Statistical Techniques Used to Conduct Univariate and Bivariate Analysis

SPSS software for Windows package was used to analyse the data gathered. First, descriptive statistics were presented. The second statistical method used was correlation analysis. This type of analysis is important since it measures the strength of the linear association between two independent variables under study. The correlation coefficient takes on values ranging between +1 and -1. The sign of the correlation coefficient (+,-) defines the direction of the relationship, either positive or negative. A positive correlation coefficient means that as the value of one variable increases, the value of the other variable increases; as one decreases the other decreases. A negative correlation coefficient indicates that as one variable increases, the other decreases, and vice-

versa. The correlation coefficient is also helpful in determining variables suitable for inclusion in the regression model. Correlation analysis can be used to trace any multicollinearity problems among independent variables. Multicollinearity exists when the independent variables are highly correlated (r=.8 and above). The data were further tested using multiple regression analysis, based on a series of Ordinary Least Squares (OLS) regressions. The study will also use Variance Inflation Factors (VIF) to detect multi-collinearity problems. This study noted that the threshold, for instance, of severe multi-collinearity is indicated by a VIF of 10 (Hair et al., 1998). Thus, throughout the investigations, the researcher will compare the results of the correlation matrix with the VIF values to determine instances of severe multi-collinearity. One of the key assumptions of regression is that the variance of the errors is constant across observations, to test for heteroscedasticity problems, this study uses the Durbin Watson test. The variables and their definitions are summarised in table 5.4.

Table 5.4: Definitions of Variables

Variables	**Description**
Dependent	
LOGAUDIT	Natural log of audit fee (source: Financial statements)
Control variables	
LOGTOTASSETS	Natural log of total assets (source: Financial statements)
UKSUBS	Number of subsidiaries located in UK (source: Financial statements)
USSUBS	Number of US subsidiaries (source: Financial statements)
REG	Binary variable;= 1 if the company belongs to a closely regulated industry that is a financial or utilities industry;= 0 otherwise
ROA	Profit before interest and taxation (EBIT)/total assets (%) (source: Datastream)
STOCK	% total assets represented by stock (source: Datastream)
DEBTORS	% total assets represented by debtors (source: Datastream)
GEARING	% of long term liabilities over total assets
LOSS3YEARS	Binary variable;= 1 if the company incurred a loss in the previous 3 years; = 0 otherwise
LOGDELAY	Natural log of the Numbers of days between financial year-end and date audit report signed by auditor (source: Financial statements)
LONDON	Binary variable;= 1 if auditor has a London address;= 0 otherwise
BIG4	Binary variable;= 1 if auditor is Deloitte & Touche, Ernst & Young, KPMG or PricewaterhouseCoopers;= 0 otherwise
BUSY	Binary variable:= 1 if company's financial year-end is between 31 December and 31 March inclusive; = 0 otherwise
Governance	

Board	
BOARDSIZE	No. of directors on the board
DUALITY	Binary variable:= 1 if CEO is also Chairman of the Board and; = 0 otherwise
%INDDIRS	% independent non-executive directors on the board (source: financial statements)
BOARDMEET	Number of board meetings (source: financial statements)
Audit committee	
ACSIZE	Number of members on audit committee (source: financial statements)
ACMEET	Number of audit committee meetings
%ACCOMM	% of attendance by audit committee members in audit committee meetings
%ACNEXEC	% of audit committee members that are non-executive directors
%SUEXPERT	% of financial experts on audit committee who are CEO or chairman of a board of directors
%ACCEXPERT	% of Audit committee members who have relevant accounting education, qualification and experience(CPA, CFO, finance director, financial controller, CIMA, auditor or chief accounting officer)
%FINEXPERT	% of Audit committee members who have recent and relevant financial experience
ACE	Binary variable;= 1 if all audit committee members are non-executive directors, at least one member has relevant financial expertise, meet at least three times a year and having minimum size of three audit committee members;= 0 otherwise
Ownership	
ABLOCKOWN	% of ordinary shares owned by substantial shareholders (owning in excess of 3% shares)
ANEXSHARES	% of ordinary shares owned by non-executive directors
AEXESHARES	% of ordinary shares owned by executive directors
NON-AUDIT	
LOGTOTNON AUDIT	Natural log of non-audit services fee paid to auditor (source: financial statements)
LEGIST (M)	Total non-audit services fee from other services pursuant to legislation (source: financial statements) in Millions
TAX (M)	Total non-audit services fee from taxation (source: financial statements) in Millions
CORPFINANCE (M)	Total non-audit services fee from corporate finance (source: financial statements) in Millions
OTHERSERVICE(M)	Total non-audit services fee from any other services (source: financial statements) in Millions
AUDITVSNON	Binary variable;= 1 if total non-audit fees is greater than audit fees;=0 otherwise

5.7 Chapter Summary

The first part of this chapter provides details of data collection. Most of the data used in this study were obtained from the companies' annual reports for the years 2007 and 2010. The required annual reports were downloaded from the individual company's website and the filings section of *Thomson One Banker*. Most of the data were hand collected from companies' annual reports. The data were divided into three categories: audit data, governance data and financial

data. Audit fee and non-audit fee data were collected from the notes to the accounts listing details of the remuneration paid to the company's auditor. Governance data were collected from annual reports, in particular, the corporate governance section. Board of directors' profiles, remuneration report, governance statement, directors' report and audit committee reports were analysed in order to obtain relevant governance information. Financial data for the study were obtained from *Datastream* and from financial statements in cases where any data were missing from the *Datastream* database.

The second part of the chapter provides details of sample firms. The sample selected for this study consisted of all companies listed on the FTSE All Share (UK) as at 31st December 2007, information which is available on the FTSE website. The initial number of companies was 672, including investment holding companies. The removal of investment holding companies from the list reduced the final sample of companies to 492 in 2007. Of these 492 companies, 385 remained and were usable at the end of 2010. This study includes financial institutions in the sample as the current economic crisis and the collapse of banks and financial institutions has increased interest and concern regarding the governance of these institutions. The sample was drawn from 10 different sectors which were identified from the FTSE All Share Index Series, constituents, weightings & performance reports as at 31st December 2007. The biggest industry was the Industrials sector and the smallest was the Telecommunications sector.

Discussion of the sample is followed by description of the research design and measurement procedures. The measurements used to measure the dependent variable (LOGAUDIT) and various audit fee determinants covering board characteristics, audit committee characteristics, ownership structure and non-audit are described. The discussion of the research design comprises an explanation of the independent variables and control variables, including measurement procedures and the relationship expected between each independent and control variable. Relevant past literature is used to support the choice of variables and the respective forms of measurement.

Lastly, details of data analysis are described. SPSS for windows package is used to analyse the data gathered. First, descriptive statistics are presented. The second statistical method used was correlation analysis. The relationships between dependent variable and independent variables were tested using multiple regression analysis, based on a series of Ordinary Least Squares (OLS) regressions. The variables and their definitions are summarised in Table 5.4.

CHAPTER 6: DATA ANALYSIS

6.1 Introduction

The data analysis chapter will be organised into three sections. First, descriptive statistics will be presented, showing mean, median, standard deviations as well as maximum and minimum values for each variable employed in the empirical analysis investigating the impact of governance characteristics and non-audit fees on audit pricing. The descriptive analysis includes: a combined analysis of the overall sample for both the pre-economic crisis period (2007) and post-economic crisis period (2010) and a detailed analysis based on the individual years. This is followed by a correlation matrix, showing a two way Pearson correlations between the variables included in this study. The correlation matrix is important as it could highlight the associations between audit fees and the explanatory variables used in the study. It therefore could support the relationship found in the regression analysis. In addition, correlations areuseful in detecting the possibility of multicollinearity between the independent variables that could serve to undermine the subsequent multiple regression results. The chapter continues with the results of detailed multivariate regression analysis (pooled dataset) to investigate the hypotheses set out in chapter 4. The multivariate analysis includes robustness tests on the impact of various control and governance characteristics variables on audit fees.

Table 6.1: Descriptive Statistics for Dependent and Independent Variables

	Combined period (2007&2010)				Pre-economic crisis (2007)				Post-economic crisis (2010)			
	Mean	Std. Deviation	Min	Max	Mean	Std. Deviation	Min	Max	Mean	Std. Deviation	Min	Max
AUDITFEE	1572526.23	3739175.290	6000	38000000	1449223.11	3187924.079	13103	24694144	1709823.98	4221146.674	6000	38000000
BOARDSIZE	8.87	2.566	3	20	9.05	2.692	3	20	8.67	2.409	4	17
%NEXEC	60.5013	12.28344	20.00	100.00	59.0327	12.70013	20.00	88.89	62.1098	11.73744	20.00	100.00
%INDDIRS	50.8543	12.82044	5.26	90.91	49.3985	12.67287	5.26	83.33	52.2516	12.85679	12.50	90.91
DUALITY	.02	.155	0	1	.03	.158	0	1	.02	.151	0	1
BOARDMEET	8.84	3.085	1	30	8.61	2.683	1	19	9.09	3.608	3	30
ACE	.87	.343	0	1	.86	.368	0	1	.89	.316	0	1
ACSIZE	3.51	.950	0	9	3.51	.987	0	9	3.52	.914	0	8
ACSIZEDUMMY	.98	.147	0	1	.98	.124	0	1	.97	.174	0	1
%ACNEXEC	99.7063	4.26143	0.00	100.00	99.7416	2.92722	0	100.00	99.6745	5.25693	0.00	100.00
ACNEXECDUM	.99	.088	0	1	.99	.101	0	1	.99	.072	0	1
ACMEET	4.00	1.526	0	17	3.90	1.418	1	14	4.09	1.616	0	17
ACMEETDUM	.9190	.27308	0.00	1.00	.9041	.29477	0.00	1.00	.9349	.24703	0.00	1.00
%ACCOMM	95.9540	5.43772	66.67	100.00	95.7436	5.31832	75.00	100.00	96.1629	5.53415	66.67	100.00
%ACFINEXPERT	33.6124	19.65977	0.00	100.00	38.2384	20.38044	0.00	100.00	28.8120	17.68212	0.00	100.00
EXPERTDUM	.96	.185	0	1	.96	.205	0	1	.97	.159	0	1
%ACSUEXPERT	9.7527	18.72538	0.00	100.00	9.5958	20.76767	0.00	100.00	9.9010	16.32340	0.00	100.00
%ACCEXPERT	23.8140	18.98202	0.00	100.00	28.7072	20.62989	0.00	100.00	18.7548	15.72202	0.00	100.00
NOBLOCKS	5.78	2.471	1	14	5.72	2.550	1	14	5.83	2.422	1	13
ABLOCKOWN	41.6087	18.49024	4.60	97.83	40.6408	18.50686	4.60	97.83	42.6378	18.38302	4.60	92.40
ANEXSHARES	1.85821	6.943340	0.000	72.410	2.08183	7.550862	0.000	72.410	1.63079	6.231891	0.000	53.455
AEXESHARES	4.34440	11.178649	0.000	95.093	4.28677	10.766769	0.000	67.736	4.37457	11.530287	0.000	95.093

Table 6.1: Continued.

	Combined period(2007&2010)				Pre-economic crisis (2007)				Post-economic crisis (2010)			
	Mean	Std. Deviation	Min	Max	Mean	Std. Deviation	Min	Max	Mean	Std. Deviation	Min	Max
TOTASSETS	21368.97	139975.364	25	1900519	18969.34	132811.963	25	1900519	23656.99	146158.802	26	1576305
LOGTOTASSETS	9.077810	.7994683	7.4063	12.2789	9.041856	.7950327	7.4063	12.2789	9.117324	.8034189	7.4090	12.1976
%DEBTORS	13.4636	14.59576	0.00	96.93	13.7464	13.93614	0.00	94.05	13.2439	15.22426	0.00	96.93
%STOCK	8.4271	13.95982	0.00	93.97	8.2879	14.10809	0.00	93.97	8.5239	13.75137	0.00	86.93
ROA	9.6326	10.42299	-54.00	103.06	10.7815	10.80705	-54.00	79.83	8.3994	9.88103	-46.02	103.06
%GEARING	26.9709	20.11744	0.00	109.95	28.1695	20.21335	0.00	109.95	25.8093	19.93283	0.00	93.04
LIQUIDITY	3.86795	40.267709	0.000	947.661	6.11115	56.665713	.108	947.661	1.59204	2.209905	0.000	31.857
BUSY	.76	.430	0	1	.77	.419	0	1	.74	.439	0	1
SUBS	22.66	22.793	1	294	23.25	25.253	1	294	22.17	20.026	1	179
UKSUBS	9.53	10.325	0	73	9.68	10.563	0	73	9.33	10.046	-1	65
USSUBS	2.14	3.846	0	29	2.23	4.062	0	29				
USDUMMY	.48	.500	0	1	.48	.500	0	1	.47	.500	0	1
FTSE350	.67708	.467896	0.000	1.000	.67609	.468568	0.000	1.000	.67188	.470143	0.000	1.000
REG	.21	.408	0	1	.21	.407	0	1	.21	.409	0	1
FINANCIALS	.19	.391	0	1	.19	.389	0	1	.19	.391	0	1
BIG4	.95	.220	0	1	.94	.236	0	1	.96	.200	0	1
LONDON	.61	.488	0	1	.61	.488	0	1	.61	.488	0	1
DELAY	66.30	38.328	23	181	68.02	20.201	25	181	67.02	50.118	23	181
%LEGIST	16.2576	24.00805	0.00	100.00	14.8862	22.64597	0.00	100.00	17.7408	25.31626	0.00	100.00
%TAX	40.5945	34.15486	0.00	100.00	38.6316	33.09848	0.00	100.00	42.6987	35.13304	0.00	100.00
%CORPFIN	12.9585	25.80181	0.00	100.00	13.4754	25.59198	0.00	100.00	12.5944	26.13764	0.00	100.00
%OTHERSERVIS	30.1454	32.95001	0.00	100.00	32.9280	34.22503	0.00	100.00	26.9661	31.22725	0.00	100.00
TOTNONAUDIT	1114399.74	2359931.886	0	25000000	1194188.17	2413265.850	0	25000000	1045098.14	2298944.768	0	18706882
LOGNONAUDIT	5.366634	1.2364728	0.0000	7.3979	5.451576	1.1471731	0.0000	7.3979	5.290364	1.3134461	0.0000	7.2720
AUDITVSNON	.29	.456	0	1	.33	.470	0	1	.26	.439	0	1

6.2 Descriptive Statistics

Table 6.1 presents the descriptive statistics for dependent (audit fees), independent variables such as board characteristics variables, audit committee characteristics variables, ownership variables, non-audit fees variables and control variables for the combined period (2007 and 2010), for the pre-economic crisis period (2007) and post-economic crisis period (2010). The mean for audit fee is approximately £ 1,572526 for the combined period, with a standard deviation of £3,739,175. The range of fees paid by the audit clients starts as low as £6,000 and goes as high as £38,000,000. It is observed that there is an increase in audit fees from a mean of £1,449,223 pre-economic crisis to £1,709,823 in the post-economic crisis period or an increase of 18% in audit fees over these two periods. These results suggest that auditors have increased their fees over the years, especially when the economic environment has become more complicated, since more audit work is needed. The mean for non-audit fee is £1,114,399 for the combined period, with a median of £356,000. It is observed that the average non-audit fees paid to the auditor decreased significantly from £1,194,199 in the year 2007 to £1,045,098 in the year 2010, with a decrease in median from £400,000 to £300,000. Over reliance of the companies' auditors on non-audit services could affect their independence, especially independence in appearance. On average, 29% of the sample companies pay more non-audit fees to their auditor as compared to audit fees in the combined period. This study observes a reduction of 7% in the number of companies paying more for non-audit services: from 33% in 2007 to 26% in 2010. Using the detailed disclosure of Non-audit fees in annual reports, non-audit fees are categorised into four services. On average, 16% or £248,503 of the total non-audit fees paid by listed companies in UK for the combined period derived from other services supplied pursuant to such legislation (%LEGIST). There was an increase in this type of non-audit service during the combined period: from 15% in 2007 to 18% in 2010. Tax services are the services most often provided by the company's auditor to their audit client. On average, 41% or £326,313 of the total non-audit fees of the sample companies derived from tax services and the study observes an increase in these services from 38% in 2007 to 43% in 2010. Other services that are also frequently provided by the auditor are corporate finance related

services. The average proportion of corporate finance related transactions to total non-audit fees wass 13% for the combined period and there was a slight decrease of 1% from 13% in 2007 to 12% in 2010. This study found that other non-audit services such as pension scheme audits, SOX related compliance services, other services related to pensions, actuarial services and IT services were not popular among the companies and the proportion to total non-audit fees was too insignificant (below 1%). Therefore, these services were combined with other services figures disclosed in the annual reports. Combining these services, other non-audit services constituted 30% of total non-audit fees for the combined period and showed a downward trend of 33% in 2007 and 27% in 2010. Overall, this study observes a reduction in total non-audit fees, the number of companies paying more for non-audit services as compared to audit fees, fees paid for corporate finance related transactions and other non-audit services. This reduction could be due to an increase in awareness of the effect of non-audit services on auditor independence. However, the increase in fees for other services supplied pursuant to such legislation (%LEGIST) and tax services (%TAX) could reflect that companies have increased their reliance on the auditor to help them in filing for documents with the authorities, including tax authorities.

Table 6.1 also shows that, on average, the size of the board is approximately nine members, with a standard deviation of 2.56. This figure is lower than Adelopo and Jallow's (2008) finding of an average board size of 11 but is consistent with Chan et al. (2012). There is no obvious change in board size over the two periods; however, table 6.1 shows an increase in the proportion of non-executive directors from 59% in 2007 to 62% in 2010, suggesting that the companies have increased the number of non-executive directors on their board to replace executive directors. There is an upward trend in the proportion of non-executives on boards, especially post-Cadbury. Conyon (1994) found a proportion of 37.77% in 1993, while O'Sullivan (1999), using 1995 data, documented average representation of 50.2% by non-executives on boards. Most recently, by reporting an average proportion of non-executives of 54% (using 2004 data), Zaman et al. (2011) confirmed that non-executive representation on boards is becoming more important. Further analysis of non-executive directors

shows that on average only 85% of the non-executives are independent as defined by the code (UK Corporate Governance Code, 2010). Independence was determined after reading the disclosure in the companies' governance reports regarding board members, as companies are required by the code of corporate governance to disclose detailed information regarding board independence. This proportion is consistent over the two periods. The average proportion of independent non-executive directors on the board was 51% in the combined period, suggesting that UK companies have followed the requirement by the UK Corporate Governance Code (2010) for there to be a majority of independent directors on the board. There was an increase in the proportion of independent non-executive directors on the boards from 49% pre-economic crisis (2007) to 52% in the post-economic crisis period (2010), suggesting an increase in compliance to the requirement of the Code by UK companies.

In terms of board leadership, only two percent of the companies in the combined period have the same individual occupying the positions of company chairman and CEO. There is also a reduction of one percent of CEO duality case from three percent in 2007 to two percent in 2010. It appears that large UK companies are now less likely to exhibit CEO duality than was the case in the 1990s. There has been a significant reduction in the percentage of companies having the same individual in the position of company chairman and CEO. For example, Conyon (1994) reported 23% CEO duality in 1993, O'Sullivan (1999) reported 15% for the year 1995 and recently Zaman et al. (2011) reported a significant reduction as only 3% of their 135 sample firms in 2004 had the same person occupying these two important positions. The continuous reduction in the CEO duality case is a result of the recommendation of the codes of corporate governance (e.g. UK Corporate Governance Code, 2010). Section A.2.1 of the most recent codes highlighted that the roles of chairman and chief executive should not be fulfilled by the same individual and the division of responsibilities between the chairman and chief executive should be clearly established, set out in writing and agreed by the board. The average frequency of board meetings is eight, with a minimum of one and a maximum of 30 meetings a year. The average meeting frequency is similar to prior UK and US studies such as Zaman et al. (2011) and Abbott et al. (2003). There was only a slight increase in the

number of meetings over the two periods. However, a further investigation of the maximum value reveals that the company which had 30 meetings (in 2010) disclosed in their annual report that their board's agenda was considerably challenged during the period under review by the market environment. Consequently, more board meetings were necessary for the year 2010 as compared to previous years (e.g. 10 meetings in the year 2007).

As for the audit committee characteristics, table 6.1 illustrates that on average, the number of audit committee members is slightly more than 3 (3.51) and 98% of sample firms have at least three audit committee members. The audit committee's average size remains constant over the two periods; however, the number of companies having a minimum of three members, or in smaller companies two, declined by 1% in 2010 as compared to the year 2007. This finding shows that most of the listed companies in the UK have followed the requirement of the Code of Corporate Governance that audit committees of FTSE 350 firms should have at least three members and smaller firms should have at least two. This is supported by results of detailed analysis (see appendix 1) which reveal that FTSE 350 firms have an average 4 audit committee members while non FTSE 350 firms on average have 3 members. However, it is interesting to point out that even though the maximum number of audit committee members in the sample is 9, the minimum number is 0. This result reveals that there is a company fully listed on London Stock Exchange (listed on FTSE 350) which still does not have an audit committee. The result highlights the existence of a company which does not comply with the requirement of The Combined Code and also the recommendation of the Cadbury (1992) report and other reports (e.g. Smith Report, 2003; Higgs Report, 2003) that a company should have an audit committee to enhance governance effectiveness. A detailed investigation on this particular company reveals that it also has CEO duality, does not have a strong independent non-executive element or meet certain other requirements stated in the Combined Codes (Combined Code 2003, 2006, 2008 or 2010). However, the company has provided in the annual report an explanation for non-compliance with the Code as required under the "comply or explain" stipulation by the UK Combined Code. It seems that the company is

taking advantage of the UK corporate governance system, which is more open, and is self regulated.

To be more effective, the Codes (e.g. UK Corporate Governance Code, 2010) also recommend that not only should the committee number at least three but also the membership should only consist of independent non-executive directors. This is to ensure optimal effectiveness as independent non-executive directors could act on behalf of the shareholders. Almost all the companies have complied with this recommendation as 98% of the companies in the study only have non-executive directors on their audit committee. Consequently the average percentage of non-executive membership on the audit committee is 99.70%, with a median value of 100%. Similar to audit committee size, the proportion of non-executive directors on audit committees is also consistent over the two periods under study. Partitioning firms into FTSE 350 and Non FTSE 350 reveals that there is no significant difference between the mean percentages of non-executives between the two groups (99.09% for non-FTSE 350 and 99.78% for FTSE 350 firms). The result of this study is similar to Zaman et al.'s (2011) finding of 99% compliance with the requirement that the audit committee should only consist of independent non-executive directors. In addition, this study captures the share-ownership of non-executive and executive directors. On average, only 1.8% of total company shares are owned by non-executive directors while 4.3% are held by executive directors for the combined period. There is only a slight decrease in non-executive ownership from the year 2007 to the year 2010 while executive share ownership remains the same.

The average frequency of audit committee meetings is about 4 times per year (3.84), with a maximum of 17 meetings per-year and a minimum of none. This is in line with the recommendation of the corporate governance code, which recommends a minimum of 3 meetings per year. Aware of this recommendation, 91.90% of the sample companies have at least 3 meetings per year. Both FTSE 350 firms and smaller firms in the sample company have meetings more than three times a year (an average of 4.59 times for FTSE 350 and 3.85 for non FTSE 350 firms). This figure is significantly higher than the percentage identified by Zaman et al. (2011). Based on 195 sample firms listed on FTSE

350 in 2004, the researchers found that only 39% of their sample had at least 3 audit committee meetings per year. This lower percentage could be due to the time factor as both the Higgs Report and Smith Report were released in 2003 and the listed companies needed some time to consider and apply their recommendations. Comparing the two periods (pre- and post-economic crisis), it is found that compliance with the recommendation of the Codes regarding the minimum number of meetings increased by 4% from the year 2007 to the year 2010. The incidence of high profile business failures such as Northern Rock has increased pressure on listed companies to strengthen their governance to safeguard the company and their shareholders and hence to comply with the recommendations of the Code of Corporate Governance. Commitment of audit committee members to attend scheduled meetings is important to ensuring the committee's effectiveness.

Another measure of effectiveness for audit committees is the existence of a financial expert on the committee, which could be especially helpful in detecting material misstatements in financial reports. On average, 96% of the sample firms (combined period) have at least one supervisory or accounting expert. On average the proportion of audit committee members who are either accounting or supervisory finance experts is 34%, with a minimum of 0% and a maximum of 100%. There was an increase of 1% in the existence of finance experts on audit committees among UK listed companies from 96% in 2007 to 97% in 2010. The result of this study shows that the number of audit committees with at least one member with finance expertise has increased considerably in the last few years as a previous UK study (Zaman et al., 2011) indicated only 70% compliance in 2004. This figure is also higher than the finding by a US study (Abbott et al., 2003) that 80% of audit committees in the US had at least one member with financial expertise. Analysing further, the expertise is divided on the basis of accounting expertise and supervisory expertise. The mean proportion of accounting experts on audit committees who have relevant accounting education, qualifications and experience (Certified Public Accountant, Chief Financial Officer, finance director, financial controller, CIMA, auditor or chief accounting officer) is 24%. On the other hand, the average proportion of supervisory finance experts who are current or former CEOs or chairmen of the

board of directors on an audit committee is 10%. Analysis was also carried out to investigate whether FTSE 350 companies have a higher proportion of audit committee finance expertise. The descriptive statistics show that non FTSE 350 have a higher proportion of audit committee finance expert as compared to FTSE 350 companies (34% for non FTSE 350, 32% for FTSE 350). The same trend is found for accounting finance expert and supervisory finance expert (Please see appendix 1).

Zaman et al. (2011) used a composite measure for audit committee effectiveness based on 4 variables: size of the committee (at least 3 members for FTSE 350 and 2 members for FTSE small capital firms), independence of the committee members (contains only non-executive directors), number of committee meetings (a minimum of 3 meetings per year) and existence of expertise on the committee (existence of at least one finance expert on the committee). An audit committee is only considered effective if all four criteria are met. Using a dummy variable to indicate whether these conditions were fulfilled, 87% of the sample firms were found to have effective audit committees in the combined period. There is an increase of 3% in audit committee effectiveness in these two periods: from 86 % in 2007 to 87% in 2010. The result shows a significant increase in the effectiveness of the audit committee over the last few years in the UK compared to earlier UK-based evidence provided by Zaman et al. (2011), which documented that only 16% of sample firms had effective audit committees in the year 2004. Further analysis reveals that there has been a considerable increase in the number of companies having a minimum of 3 (or 2 in the case of smaller firms) audit committee members (21% in Zaman et al., 2011) and in the committees' activity (only 39% had a minimum of 3 meetings per year).

In addition to audit committee characteristics recommended by the Codes, this study adds a variable measuring audit committee commitment (ACCOMM) since commitment of audit committee members to attend scheduled meetings is also important in enhancing committee effectiveness. On average, the audit committee members gave 96% commitment to attend the scheduled audit committee meetings for the combined period and the years 2007 and 2010.

Table 6.1 also shows the descriptive statistics for other determinants of audit fees. The average number of companies with block shareholders holding 3% shares or more is 6, with average share ownership of 41% of shares. The average number of block holders remained constant over the two periods while share ownership increased from 40% in the year 2007 to 43% in the year 2010.Total assets are used to measure client size. The average company size based on total assets is £21,368 million for combined period; 13% and 8% of total assets are represented by debtors and stock respectively. Despite the economic crisis in 2008 and 2009, the average total assets of the companies increased from an average of £18,969 millions in 2007 to £23,657 million in 2010. The average return on assets (ROA) is 9.63%, with a minimum return as low as -54 % and a maximum return of 103%.There was a decrease of 1% in ROA between these two periods. The gearing ratio ranges from 0 to 109%, showing that some companies rely heavily on long term liabilities to finance their assets, which exposes them to significant financial risk, especially during difficult economic conditions. However, the average gearing is only 26.97%, with a median value of 25.20%. On average 20% of the companies experienced financial loss for the three years of the combined period, made up of 11% loss occurrence in 2007 and 29% in 2010. There was apparently an increase of 18% in the number of companies experiencing losses in the last three years, including 2010, which might be due to the losses incurred in 2008 and 2009 when the economic crisis was most severe. 67.71 % of the sample firms are listed on the FTSE 350 of London Stock Exchange, while the remainder are listed on FTSE Small Capital. 21% of the company represent regulated industries, with 19% being financial companies. The number of subsidiary companies held by the sample firms ranges from a minimum of one to a maximum of 294 subsidiaries and the average holding is 22 subsidiary companies. Partitioning the subsidiaries into UK and US subs revealed that more than half of the holdings are in companies operating outside the UK (average of 90% subsidiaries) and 48% of the companies have subsidiaries in the US. In terms of ownership, on average the firms under study are owned by 5.81 block- holders who hold at least 3% share ownership. On average, 76% of the sample companies have an accounting year that ends between 31st December and 31st March (BUSY) for the combined period and interestingly the percentage dropped from 77% in 2007 to 74% in

2010, indicating that 3% of companies changed their accounting period between these two periods. 95% of the sample companies are audited by one of Big Four auditing firms, whilst 61% of the companies are audited by a London-based auditor. There is a slight decrease (2%) in the percentage of companies audited by the Big Four auditing firms in 2010, while the number of companies audited by London auditors remained the same. The average audit delay (DELAY) is 66 days, with a standard deviation of 38 days for the combined period and with the length of the audit period ranging from a minimum of 25 days to a maximum of 181 days. There is a decrease of 6 days average report lag between the years 2007 and 2010.

6.3 Correlation Matrix

Table 6.2 contains a correlation matrix showing two-way Pearson correlations between all variables included in this study. An examination of correlations is useful in identifying associations between individual variables, especially between the dependent variable and each independent variable as this could assist in understanding the subsequent multivariate results. Another use of correlation analysis is to trace any multicollinearity problems among independent variables. According to Judge et al. (1988), multicollinearity exists when the independent variables are highly correlated (r=.8 and above). In the same vein, Hair et al. (1995) and Gujrati (2003) suggests that a correlation value of below 0.80 is deemed to be safe for the variables to be included together in the multivariate regression analysis. Singularity is another related issue. Singularity occurs when one independent variable is actually a combination of other independent variables. The existence of multicollinearity and singularity breaches the OLS assumption of no multicollinearity, which could cause problems in generalising the regression results. Multiple regressions do not relate well to multicollinearity or singularity, and such combinations do not produce a good regression model (Pallant, 2001). The double and single asterisks in table 6.2 signify statistically significant correlations at one percent and five percent respectively. The correlations in column 1 show how each of the explanatory variables relates to audit fees. As expected, the variable measuring client size (LOGTOTASSETS) correlates significantly with audit fees, with correlation values of 0.784 reflecting that bigger companies pay

Table 6.2: Pearson Correlation Matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	LOGAUDITFEE	1																	
2	BOARDSIZE	.534**	1																
3	%NEXEC	.281**	.043	1															
4	%INDDIRS	.293**	-.024	.642**	1														
5	DUALITY	-.089*	-.073*	-.098**	-.084*	1													
6	BOARDMEET	.040	-.039	-.031	.069	-.050	1												
7	ACE	.174**	.121**	.153**	.152**	-.074*	.039	1											
8	ACSIZE	.404**	.522**	.247**	.269**	-.095**	.014	.200**	1										
9	ACSIZEDUMMY	.073*	.169**	.064	.111**	-.090*	.015	.333**	.286**	1									
10	%ACNEXEC	.049	.002	.074*	.100**	-.119**	.071	.184**	.025	-.010	1								
11	ACNEXECDUM	.050	.028	.107**	.119**	-.201**	.088*	.185**	.079*	.102**	.993**	1							
12	ACMEET	.456**	.384**	.170**	.223**	-.053	.227**	.320**	.281**	.094**	.022	.024	1						
13	ACMEETDUM	.215**	.172**	.177**	.146**	-.087*	.012	.708**	.180**	.098**	-.021	-.021	.398**	1					
14	%ACFINEXPERT	-.199**	-.247**	-.181**	-.160**	.107**	-.041	.070	-.272**	.028	-.085*	-.077*	-.106**	-.113**	1				
15	EXPERTDUM	.001	-.073*	.047	.035	-.019	.038	.488**	.031	.075*	-.014	-.014	.024	-.004	.329**	1			
16	%ACCOMM	-.008	-.059	.024	.024	-.052	-.046	-.066	-.145**	-.019	.005	.020	-.004	-.049	.049	-.023	1		
17	%ACSUEXPERT	-.059	-.089*	-.010	.034	-.035	-.021	-.003	-.107**	-.002	.003	.006	-.016	-.050	.504**	.100**	.025	1	
18	%ACCEXPERT	-.149**	-.168**	-.176**	-.199**	.144**	-.019	.072*	-.174**	.031	-.091*	-.084*	-.094**	-.065	.523**	.231**	.024	-.468**	1
19	NOBLOCKS	-.255**	-.299**	-.122**	-.030	-.023	.070	.028	-.208**	.022	.063	.052	-.138**	-.007	.155**	.074*	.009	.054	.105**
20	ABLOCKOWN	-.311**	-.283**	-.010	-.109**	.022	-.031	-.066	-.243**	-.037	-.004	-.025	-.196**	-.102**	.128**	.064	.007	.086*	.044
21	ANEXSHARES	-.187**	-.062	.149**	-.096**	.042	-.099**	-.095**	-.116**	-.086*	-.127**	-.102**	-.076*	-.059	.068	-.016	.092*	.062	.011
22	AEXESHARES	-.205**	-.109**	-.160**	-.193**	.123**	-.133**	-.121**	-.135**	-.029	-.093*	-.081*	-.133**	-.138**	.122**	-.005	.018	.062	.069
23	LOGTOTASSETS	.784**	.616**	.284**	.320**	-.064	.029	.197**	.425**	.072*	.062	.053	.469**	.225**	-.261**	.015	-.059	-.050	-.223**
24	DEBTORS	.066	-.062	-.085*	-.088*	-.019	.094*	.006	-.041	.017	-.029	-.009	.056	.038	.068	-.033	.075*	-.024	.093*
25	STOCK	-.103**	-.147**	-.067	-.001	-.024	.012	-.020	-.053	.007	.040	.046	-.104**	-.040	.014	.027	.010	-.006	.017
26	ROA	-.097**	-.093*	-.039	-.067	.048	-.143**	-.026	-.034	-.018	-.070	-.071*	-.062	-.006	.111**	-.014	.004	-.015	.129**

Table 6.2 : Continued

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
27	3YEARSLOSS	-.113**	-.017	.021	-.001	.048	.162**	-.051	-.044	-.037	-.001	-.001	.049	-.038	-.053	.005	.002	.012	-.068
28	GEARING	.105**	.076*	.046	.048	-.044	-.015	.053	.061	.041	-.011	-.015	-.035	.035	-.074*	.041	-.039	-.050	-.030
29	LIQUIDITY	-.090*	-.055	-.140**	-.091*	-.007	.015	-.034	-.094**	.009	.004	.005	-.027	-.053	.095**	.012	-.028	.001	.097**
30	BUSY	.202**	.138**	.045	-.008	-.046	-.010	.021	.029	.038	.037	.029	.136**	.000	.017	.022	.057	.045	-.028
31	SUBS	.377**	.171**	.017	.014	.009	-.085*	.055	.132**	.024	.006	-.019	.098**	.086*	-.045	-.048	-.017	-.051	.002
32	USDUMMY	.399**	.086*	.132**	.173**	.016	-.077*	.051	.100**	-.016	.001	-.020	.138**	.116**	-.035	-.074*	.039	-.055	.018
33	FTSE350	.462**	.324**	.153**	.173**	-.033	-.071	.171**	.303**	.010	-.009	-.021	.236**	.221**	-.168**	.004	-.056	-.074*	-.106**
34	REG	.049	.217**	-.041	-.045	.041	.002	.038	.118**	.013	-.010	-.038	.200**	.021	-.046	.011	-.068	.026	-.075*
35	FINANCIALS	.026	.199**	-.046	-.055	.052	-.007	.028	.086*	.004	-.015	-.044	.198**	.004	-.030	.018	-.041	.022	-.055
36	BIG4	.204**	.094**	.071*	.137**	-.001	.061	.140**	.118**	.046	.071	.055	.112**	.177**	-.126**	-.012	-.021	-.049	-.093*
37	LONDON	.323**	.238**	.152**	.129**	.058	-.059	.059	.159**	.007	-.018	-.031	.204**	.112**	-.039	-.008	-.062	-.022	-.016
38	DELAY	-.118**	-.020	-.094**	-.069	.019	.005	-.045	-.063	-.032	-.039	-.055	.025	-.051	.028	.000	-.004	.010	.017
39	LEGIST	.464**	.169**	.064	.113**	.005	.022	.040	.095**	.014	.027	.037	.179**	.025	-.008	.049	.061	.060	-.069
40	TAX	.511**	-.141**	-.114**	-.056	.047	-.040	-.027	-.056	.071	.002	-.034	-.147**	-.056	.022	-.040	.068	-.028	.056
41	CORPFIN	.251**	-.031	.056	-.020	-.039	.036	-.002	-.059	-.057	-.040	-.020	-.014	.000	.018	.029	-.052	.028	-.011
42	OTHERSERVIS	.494**	.048	.028	-.008	-.021	-.002	.000	.036	-.039	.009	.023	.032	.039	-.034	-.018	-.076*	-.040	.002
43	LOGTOTNONAUDIT	.490**	.267**	.100**	.160**	-.084*	.129**	.032	.212**	.022	.074*	.071*	.193**	.061	-.120**	-.038	-.031	-.062	-.062
44	AUDITVSNON	-.226**	-.074*	-.054	-.045	.044	.101**	-.031	-.039	-.020	.004	.017	-.085*	-.022	-.004	-.001	-.004	.022	-.022

Table 6.2 : Continued

		19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
19	NOBLOCKS	1																	
20	ABLOCKOWN	.529**	1																
21	ANEXSHARES	-.098**	.087*	1															
22	AEXESHARES	-.137**	.089*	.055	1														
23	LOGTOTASSETS	-.336**	-.378**	-.161**	-.183**	1													
24	DEBTORS	.000	-.068	.021	-.009	-.166**	1												
25	STOCK	.106**	-.007	.043	-.009	-.089*	-.048	1											
26	ROA	-.014	-.035	.056	.091*	-.167**	.064	.024	1										
27	3YEARSLOSS	.049	.103**	-.011	-.023	-.060	-.144**	.043	-.326**	1									
28	GEARING	-.034	-.071	-.027	-.133**	.250**	-.260**	-.122**	-.062	-.005	1								
29	LIQUIDITY	-.015	-.011	-.010	.032	-.087*	.013	.003	.002	.000	-.032	1							
30	BUSY	-.088*	-.103**	.007	-.090*	.174**	.024	-.172**	-.053	-.017	-.048	.033	1						
31	SUBS	-.083*	-.052	-.121**	-.006	.237**	.026	-.063	.031	-.086*	.019	-.023	.081*	1					
32	USDUMMY	.001	-.078*	-.150**	-.071	.148**	.105**	-.081*	.006	-.092*	-.125**	-.007	.113**	.347**	1				
33	FTSE350	-.157**	-.266**	-.165**	-.089*	.547**	-.099**	-.014	.151**	-.166**	.136**	-.085*	.086*	.169**	.145**	1			
34	REG	-.059	-.064	-.056	-.010	.312**	-.112**	-.216**	-.077*	.108**	.098**	-.027	.064	-.013	-.113**	.084*	1		
35	FINANCIALS	-.017	-.019	-.043	.013	.262**	-.082*	-.196**	-.083*	.142**	.000	-.025	.033	-.014	-.114**	.046	.929**	1	
36	BIG4	.027	-.071	-.100**	-.104**	.185**	.060	.007	-.011	.024	.159**	-.212**	-.090*	.023	.102**	.183**	.018	.005	1
37	LONDON	-.091*	-.048	-.010	-.038	.262**	-.051	-.092*	-.004	-.044	-.063	-.020	.148**	.143**	.181**	.202**	.079*	.089*	-.112**
38	DELAY	.003	.046	.082*	.042	-.130**	.091*	-.010	-.046	.009	-.081*	-.009	-.068	-.023	-.073*	-.104**	.068	.085*	-.085*
39	LEGIST	-.046	-.017	-.030	-.009	.192**	-.042	-.077*	-.043	.057	-.003	.017	-.001	.011	.015	.051	.193**	.181**	.040
40	TAX	.053	-.033	.024	-.067	-.166**	.128**	.071	.036	-.017	-.055	-.011	-.007	.048	.047	-.076*	-.187**	-.156**	.005
41	CORPFIN	-.047	.055	.014	.114**	.020	-.059	-.037	-.095**	.010	.095*	-.007	.021	-.057	-.079*	-.001	-.024	-.055	-.052
42	OTHERSERVIS	.013	.003	-.013	-.013	.017	-.056	.011	.069	-.031	-.016	.005	-.008	-.012	.002	.043	.072	.073*	.009
43	LOGTOTNONAUDIT	-.162**	-.181**	-.149**	-.110**	.408**	.051	-.009	-.051	-.028	.095**	-.062	.075*	.166**	.194**	.291**	.035	.024	.271**
44	AUDITVSNON	.007	.051	.030	.065	-.108**	-.137**	.079*	-.044	.107**	.072	.034	-.024	-.144**	-.135**	-.031	-.033	-.039	.058

Table 6.2 : Continued

		37	38	39	40	41	42	43	44
37	LONDON	1							
38	DELAY	-.018	1						
39	LEGIST	.120**	.022	1					
40	TAX	-.056	-.043	-.341**	1				
41	CORPFIN	-.005	.017	-.166**	-.317**	1			
42	OTHERSERVIS	-.025	.015	-.246**	-.540**	-.333**	1		
43	LOGTOTNONAUDIT	.085*	-.060	.050	-.108**	.223**	-.091*	1	
44	AUDITVSNON	-.100**	-.019	-.128**	-.116**	.293**	-.015	.263**	1

Variable definitions:

Variable	Definition
LOGAUDITFEE	Natural log of audit fee
LOGTOTASSETS	Natural log of total assets
SUBS	Number of subsidiaries
USDUMMY	Binary variable;= 1 if the company has US subsidiary ;= 0 otherwise
REG	Binary variable;= 1 if the company belongs to regulated industry;= 0 otherwise
FTSE350	Binary variable;= 1 if the company belongs to FTSE 350;= 0 otherwise
FINANCIALS	Binary variable;= 1 if the company belongs to financial industry;= 0 otherwise
NOBLOCKS	The number of block share holders holding 3% or more shares.
ABLOCKOWN	% of block-holder ownership

ANEXSHARES	% of non-executive director ownership
AEXESHARES	% of executive director ownership
ROA	Profit before interest and taxation (EBIT) /total asset (%)
STOCK	% total assets represented by stock
DEBTORS	% total assets represented by debtors
GEARING	% of long term liabilities / total assets
3YEARSLOSS	Binary variable;= 1 if the company incurred losses in (2005, 2006 or 2007) for 2007 or (2008, 2009 or 2010) for 2010 ;= 0 otherwise
DELAY	Numbers of days between financial year-end and audit report being signed by auditor (source: financial statements)
LONDON	Binary variable;= 1 if auditor has a London address;= 0 otherwise
BIG4	Binary variable;= 1 if auditor is Deloitte & Touche, Ernst & Young, KPMG or Price Waterhouse Coopers;= 0 otherwise
BUSY	Binary variable:= 1 if financial year-end is between 31 December and 31 March inclusive; = 0 otherwise
BOARDSIZE	No of directors on board
DUALITY	Binary variable:= 1 if CEO is Chairman of the Board and; = 0 otherwise
%NEXEC	% non-executive directors on board (source: financial statements)
%INDDIRS	% independent non-executive directors on board (source: financial statements)
BOARDMEET	Number of board meetings (source: financial statements)
ACSIZE	Number of members on audit committee (source: financial statements)
ACSIZEDUM	Binary variable;= 1 if audit committee members number more than 3;= 0 otherwise
ACMEET	Number of audit committee meetings
ACMEETDUM	Binary variable;= 1 if audit committee meetings are more than 3;= 0 otherwise

%ACCOMM	% of audit committee commitment in attending audit committee meetings
%ACNEXEC	% of audit committee that are non-executives
ACNEXECDUM	Binary variable;= 1 if all audit committee members are non-executive directors;= 0 otherwise
%SUEXPERT	% of financial experts on audit committee who are a CEO or chairman of a board of directors
%ACCEXPERT	% of Audit committee that have relevant accounting education, qualification and experience(CPA, CFO, finance director, financial controller, CIMA, auditor or chief accounting officer)
%FINEXPERT	% of Audit committee that are financial experts
ACE	Binary variable;= 1 if all audit committee members are non-executive directors, at least one member with relevant financial expertise, meet at least three times a year and have a minimum of three audit committee members;= 0 otherwise
LOGTOTNONAUDIT	Natural log of non-audit services fee (source: financial statements)
LEGIST	Non-audit services fee from other services pursuant to legislation (source: financial statements) in Millions
TAX	Non-audit services fee from taxation (source: financial statements) in Millions
CORPFINANCE	Non-audit services fee from corporate finance (source: financial statements) in Millions
OTHERSERVIS	Non-audit services fee from any other services (source: financial statements) in Millions
AUDITVSNON	Binary variable;= 1 if all non-audit fees exceeds audit fees;=0 otherwise

higher audit fees. Most of the variables measuring client riskiness show a significant correlation with audit fees. Again as expected, return on assets (ROA) and liquidity ratio has a significant negative correlation with audit fees while gearing ratio shows a significant positive correlation with audit fees. The negative correlation between audit fee and the proportion of assets in the form of stocks or inventory may reflect the reality that stocks are now relatively easier to audit due to advancement in stock inventory system and auditing technology. The losses incurred within the last three years (3YEARSLOSS) show a significant negative correlation with audit fees. This could imply that the companies that have experienced continuous losses may have less funds and therefore lower audit fees are charged by their auditor. The significant correlation results for these variables are consistent with the argument that client riskiness is an important audit fees determinant, as highlighted by much of the earlier literature (e.g. Simunic, 1980; O'Sullivan, 2000; Hay et al., 2006). The correlation between audit fees and variables measuring complexity is also consistent with the prediction. Audit fees are found to be significantly correlated with number of subsidiaries. It is assumed that a bigger company that has many subsidiary companies will pay higher audit fees and this is reflected in the inclusion of the component of audit fees paid for audits of companies' subsidiaries within the total audit fees category. Hence, it is understandable that the more subsidiary companies a group has, the more audit fees the auditor charges as remuneration for audit work. Further analysis of the subsidiaries reveals that audit fees are also significantly correlated with the existence of US subsidiaries since additional listing requirements of security commissions and SOX may demand more audit work. Similarly, companies listed on FTSE 350 pay higher audit fees as compared to smaller capital companies listed on the London stock exchange. This study, however, does not find any significant correlation between audit fees and regulated companies, which signals that auditors do not treat regulated clients and their non-regulated counterparts differently. Accounting year ending during the busy period (BUSY) has a significant positive association with audit fees. This result suggests that the company whose accounting period is between 31st December and 31st March pays higher audit fees than do other companies as this is the busiest period for the auditor due to most companies' accounting years ending during this period.

This study finds a significant negative correlation between audit fees and report lag (DELAY), which is counterintuitive as the period between the company's financial year-end and the signing of the audit report could reflect the complexity of the account audited and thus affect audit fee charges. As expected, Log total non-audit fees, individual components of non-audit fees, big audit firms (BIG4) and auditors with London addresses (LONDON) have a significant positive association with audit fees. The study also documented a significant and negative correlation between the number of block holders and the equity owned by the block holders and audit fees, which is consistent with prior studies (e.g. Zaman et al., 2011; Krishnan and Visvanathan, 2009).

With respect to board characteristics, almost all variables show a correlation result, which is consistent with the prediction except for the number of board meetings. The board size, proportion of non-executive directors on the board and also the proportion of independent directors on the board are positively correlated with audit fees, suggesting that larger and independent boards are associated with more expensive audits. This is consistent with prior studies such as Adelopo and Jallow (2008) and O'Sullivan (2000). However, existence of CEO duality shows a significant negative correlation with audit fees only at 5% significant level. Similar to Zaman et al. (2011), this study fails to find any significant correlation between audit fees and number of board meetings. The study also finds the equity owned by non-executive directors and the equity owned by executive directors to be significant and to negatively correlate with audit fees. This is consistent with O'Sullivan's (2000) finding of a significant positive correlation between audit fees and executive and non-executive share ownership.

With regards to audit committee characteristics, a number of variables show significant and positive correlations with audit fees, for example, audit committee size, annual audit committee meetings, and the existence of effective audit committee members. This result suggests that larger, more diligent and effective audit committees are associated with more expensive audit. There is a significant negative association between audit fees and the proportion of finance expert on audit committees, suggesting that greater expertise on the committee reduces the need for more intensive and expensive audits. Splitting audit

committee finance experts into audit committee supervisory experts and audit committee accounting experts reveals that only audit committee accounting expertise has a significant negative association with audit fees. This is consistent with the argument that accounting experts provide better monitoring, resulting in the charging of lower audit fees by the auditor (Krishnan and Visvanathan, 2009). Only two proxies for audit committee effectiveness representing compliance with the four core components of present audit committee regulation (UK Corporate Governance Code, 2010), namely dummy variables representing the existence of 3 (2 in a smaller company) audit committee members and at least 4 meetings a year, have a positive and significant correlation with audit fees.

A positive correlation between independent board and audit committee effectiveness variable could reflect that independent directors promote audit committee effectiveness to complement their own monitoring responsibilities towards good corporate governance. It is also interesting to see the association between other independent variables and client size. As expected, larger firms are associated with larger board size and dominance by independent non-executive directors. In addition, they are associated with more effective audit committees which are also bigger in size and more diligent as measured by the annual frequency of audit committee meetings. However, these firms are associated with lesser proportion of finance experts, especially accounting finance experts, on their audit committees. Ownership wise, larger firms are associated with fewer numbers of block holders and also less block holder ownership, suggesting that their equity is more likely to be owned by small holdings. In addition, they are associated with lower executive and non-executive share ownership, which might imply that bigger companies are more concerned with the issue of board independence. A positive correlation between company size and the number of subsidiaries and the existence of US subsidiaries is expected as larger firms are more likely to have more subsidiaries and some operate in bigger markets like the US. Riskiness wise, bigger firms are associated with lower debtor to total assets ratio; however, they are also associated with lower profitability, which is reflected by a lower return on asset ratio (ROA). It seems that bigger firms are also highly geared as the correlation

value shows a significant positive value with gearing ratio. Other correlation results show that bigger firms are positively and significantly associated with regulated industries, financial industries, big audit firms and also auditors with a London address. Correlation results also show that larger firms pay more in total non-audit fees, which is not surprising; however, maybe due to concern over auditor independence issues, they are less likely to obtain more non-audit services as compared to audit service from their auditors. Scanning the correlation results among the variables used in this study reveals only two correlation values that are considered high. The first correlation value is between company size and log audit fees, with a correlation value of 0.784. However, this value is considered acceptable as Hair et al. (1995) and Gujrati (2003) suggest that a correlation value below 0.80 is acceptable. In addition, other UK studies such as O'Sulivan (2000) and Zaman et al. (2011) have recorded the same high correlation for these two variables, with correlation values of 0.783 and 0.688 respectively. Correlation between proportion of non-executives on audit committee (%ACNEXEC) and the dummy variable representing the existence of all non-executives on audit committee (ACNEXECDUMMY) is in fact very high, with a value of 0.993. Therefore, to avoid multicollinearity problems, these variables are not included in the same regression model.

6.4 Multivariate Regression Analysis

Regression analysis is devided into two parts, the relationship between audit fees and governance characteristics and the relationship between audit fees and detailed non-audit fees. The study uses Ordinary Least Square (OLS) models to explain the relationship existing between variables under study. Skewness and kurtosis values are presented in appendix 3, which indicates that some of the variables were transformed using natural logarithms in order to satisfy the normality assumption for OLS. This study also conducted analysis of residuals and Q-Q plot analysis to test for homoscedasticity and linearity. To deal with possible multicollinearity issues, especially due to the presence of significant correlations amongst some of the independent variables, as shown in table 6.2, this study calculates the variance inflation factors (VIF) for all regression models used. The variance inflation factors (VIF) values in all cases were significantly less than 10 (generally seen as the level of concern) as Gujrati (2003, p339)

states that a VIF value of less than 10 is acceptable. In addition, as presented earlier in the correlation matrix, the correlation values of the variables included in each of the regression models were at an acceptable level (Correlation value less than .8).

6.4.1 Governance Characteristics and Ownership Structure on Audit Fees

Table 6.3 contains the results of four main multivariate regression models that test the relationship between governance characteristics and ownership structure on audit fees. In all regression models, control variables are used to control for client characteristics such as client size, complexity level, industry, and client riskiness. Also included are variables to control for auditor characteristics such as the presence of big four audit firms and those with a London address. Control variables such as busy period, report lag and period to reflect the year dummies to control for the fact that the study uses the same sample of firms in each of the two years (2007 and 2010) are also included in the regression models.

F-statistics of each model in table 6.3 are significant at one percent level, suggesting that the models are statistically valid. The R square values range between 73.6% and 74.4%, while the adjusted R square value for all models ranges between 72.7% and 73.4%. This shows that each model has a high explanatory power. The total number of observations is 768. The VIF values for all variables are mostly below 2 except for LOGTOTALASSETS, which shows a slightly higher value (2.899 in model 2). This indicates that there is no multicollinearity problem in the model.

The results of the control variables in all four models are consistent with existing research. Both audit client size and complexity have a positive and significant impact on audit fees. In this respect, many studies (e.g. Low et al., 1990; Firth, 1997; Carson et al., 2004; Lawrence et al., 2011) have found that the size of the client company as measured by their total assets is the major factor in determining the audit fee. Additionally, in his latest paper, Hay (2012) confirms that in research conducted between 1980 and 2007 client size was the most consistent and important audit fee determinant. This is consistent with the expectation that the auditor charges higher audit fees to a bigger company as more audit effort is needed in auditing the financial statements in the form of

testing and analysis of data and information (Simunic, 1980; Firth, 1985; Chan et al., 1993; Pong and Whittington, 1994; Simon, 1995; Firth, 1997; Adams et al., 1997).

The level of audit effort is expected to increase with the increasing complexity of the audit task, thereby directly influencing audit fees. Past studies like Maher et al. (1992), Brinn et al. (1994), Chan et al. (1993), Pong and Whittington (1994), Gist (1994a), O'Sullivan (1999), O'Sullivan (2000), O'Sullivan and Diacon (2002) and Basioudis and Fifi (2004) have found that the number of subsidiaries had a significant positive impact on the audit fees in their sample companies. The finding is consistent with the expectation that more audit effort is needed as a result of consolidation and elimination of intra-group transactions. This study however further analyses the subsidiaries as number of UK subsidiaries (UKSUBS) and number of US subsidiaries (USSUBS), as suggested by O'Sullivan (2000). The result of the four models shows that the number of UK subsidiaries has a negative and significant relationship with audit fees at 10% confidence level, while the number of US subsidiaries shows a positive and significant relationship at 1% confidence level. Taken together, the log total number of subsidiaries also shows a positive relationship with audit fees. The negative relationship between audit fees and number of UK subsidiaries may reflect that the auditor gives discount to companies with UK subsidiaries, probably because auditing these is less hassle as compared to overseas subsidiaries. The result for US subsidiaries is consistent with O'Sullivan (2000), who found a significant positive relationship between US subsidiaries and audit fees. The result could reflect that more audit work is required to audit companies with US subsidiaries due to cross listing and more complex regulation, such as SOX. Regulated industry (REG) is another complexity measure that has a significant negative impact on audit fees (significant at 1% confidence level). Studies have typically found reduced audit fees for companies operating in regulated industries (e.g. Ezzamel et al., 1996; O'Sullivan, 1999; O'Sullivan, 2000). This could be due to less audit work being needed as regulated companies are closely governed by oversight bodies. This finding suggests that regulatory oversight partially substitutes for external auditors as a monitoring mechanism, which leads to lower audit fees. Only two variables measuring riskiness: ratio of

debtors to total assets (DEBTORS) and ratio of stocks to total assets (STOCK), show significant impact on audit fees. As expected, the ratio of debtors to total assets (DEBTORS) has a significant positive impact on audit fees, which suggests that auditors perceive companies with higher debtors to total assets ratios as risky and charge higher audit fees. This is supported by Carcello et al. (2002), who reported that the receivable to total asset ratio has a significant positive impact on audit fees in a study using data from 258 fortune 1000 US companies from 1992-93. However, contrary to the expectation and findings of past studies, the ratio of stock to total assets (STOCK) has a negative and significant relationship with audit fees. This result could reflect that the contemporary auditing practice, especially with the availability of modern auditing technologies to deal with auditing of stock, simplified the auditing process. Therefore, lower audit fees will be charged. It was expected that report lag (LOGDELAY) would have a significant positive impact on audit fees as the longer time taken is likely to be due to a need for more audit testing and investigation. The regression results show a significant positive relationship (at 10% confidence level) between report lag and audit fees. The result is supported by other UK studies such as Chan et al. (1993), Ezzamel et al. (1996) and O'Sullivan (2000), which found a significant positive relationship between audit fees and lag between year end and date of the audit report. Although it is predicted that auditing during the auditing busy season (normally at the beginning of the calendar year) could lead to higher audit fees, there is no evidence that audits undertaken in this busy period (i.e. between 31st December and 31st March) do in fact lead to higher audit fees. This is supported by O'Sullivan (1999 and 2000), who also failed to find any evidence that auditing during the busy season has a significant impact on audit fees. This is further confirmed by Hay et al. (2006), who found that out of 32 studies between 1980 and 2003 that examined the relationship between audit fees and busy season, only 5 reported a significant positive relationship, 2 reported negative results and the remaining results were insignificant. For auditor related variables, the current study provides evidence that the address of the audit firm could itself affect audit pricing. Consistent with prior research such as that of O'Sullivan (2000), this study finds that London-based auditors charge their audit clients higher audit fees than do their regional counterparts. Hay (2012) found that audit pricing

studies, especially those conducted in the UK, that use this measurement show a very consistent positive relationship with audit fee. It is widely hypothesized that large audit firms will demand higher fees (Cameran, 2005) due to higher level of audit quality (DeAngelo, 1981), higher litigation risk (Al-Harshani, 2008) and possession of a stronger brand name (Basioudis and Fifi, 2004). However, this study finds no evidence that Big Four (BIG4) auditors are more expensive auditors. This is consistent with studies in USA and UK that have found no significant difference between fees paid to big audit firms and non-big firms (Simunic, 1980 and Brinn et al., 1994). However, further analysis reveals that the average total assets of the sample companies are £21,368 million. Early studies conducted between the early and mid-1980s (Simunic, 1980; Simon, 1986; Francis and Stokes, 1986; Palmrose, 1986) found that auditor size was not significant in cases of very large companies with assets of over $600 million. For relatively small companies, with mean assets of less than $100 million, auditor size had a positive relationship with audit fees (Francis, 1984; Francis and Stokes, 1986; Palmrose, 1986; Francis and Simon, 1987; Lee, 1996; McMeeking et al, 2006). One possible explanation for this result is that economies of scale offset the price premium for Big auditors in the large client segment (Francis and Stokes, 1986) and the positive relationship among smaller clients reflects the effect of product differentiation by the auditor rather than abuse of monopolistic power (McMeeking et al., 2006). Despite "knowledge spill-over" and "loss-leader" theories that could lead to a negative relationship between non-audit fees and audit fee, many studies have found that non-audit fees are positively related to audit fees (e.g. Ezzamel et al., 2002; Firth, 2002; McMeeking et al., 2006; Hay et al., 2006; Che Ahmad et al., 2006;). The results of this study support the positive relationship between non-audit fees and audit fee as a regression that shows a significant positive impact of non-audit fees on audit fees. A detailed discussion on this relationship is provided in the discussion of specific results that test the hypothesis on the impact of non-audit fees on audit fees. The dummy variable indicating the period shows an insignificant relationship with audit fees.

Hypotheses H1a, H1b and H1c test the relationship between audit fees and board independence. Contrary to the expectation that independent board will support

the purchase of higher quality audit, board independence variables, the percentage of independent non-executive directors (%INDDIRS) has an insignificant negative relationship with audit fees. The result is similar when the independence variable is substituted for the percentage of non-executive directors (%NEXEC). Therefore both H1a and H1b are rejected. The finding of this study is therefore inconsistent with those from prior studies in the UK, US, Hong Kong and Malaysia (O'Sullivan, 2000; Carcello et al., 2002; Tsui et al., 2001 and Bliss et al., 2007), which found that the percentage of non-executive directors has a significant positive impact on audit fees. Two UK studies, Bliss et al. (2007) and Zaman et al. (2011), have documented that CEO/chairman duality has a significant impact on audit fees. However, the result of this study fails to document the same finding. Therefore, the third Hypothesis (H1c): that CEO duality has a significant negative impact on audit fees, is also rejected. The result of this study, however, is consistent with O' Sullivan's (2000) finding of an insignificant relationship between CEO/chairman duality and audit fees. The small variation in the incident of CEO duality (2%) as shown by descriptive statistics earlier might explain why the result is not significant.

It is expected that more experienced and larger boards could enhance board effectiveness; thus a higher quality audit would be required that would lead to higher audit fees. Therefore, model 2 tests the impact of board size (BOARDSIZE) on audit fees. To avoid multicollinearity effects, as these two variables have quite high correlation with each other, audit committee size (ACSIZE) is not included in the model. Consistent with previous UK studies (e.g. Boo and Sharma, 2008 and Adelopo and Jallow, 2008), this study finds an insignificant positive relationship between board size and audit fees. Consequently, hypothesis H2, predicting a positive relationship between board size and audit fees, is rejected. Hypothesis H3 tests whether there will be a positive relationship between the number of board meetings and the audit fee. However, this study fails to find any significant relationship between board diligence and audit fees. While standard coefficient values show that board diligence, measured by the number of board meetings held during the year show a positive association, the relationship found is not statistically significant ($p = 0.113$). As a result, hypothesis H3 is also rejected. Overall, results show that

board characteristics, including board size, board independence and board diligence, have no significant impact on audit pricing decisions. This could be due to the fact that price discount as a result of improved internal control by having an effective board in place is offset by additional testing and audit work requested by an effective board to complement their monitoring role. This is because, in the wake of corporate scandal and failure, an effective board may encourage increased testing by the auditors so as to minimise the likelihood of future financial problems to the firm and to avoid subsequent criticism associated with it.

Hypothesis H4 tests the relationship between audit committee effectiveness and audit fee. Four cornerstones of good audit committee as required by the Codes (e.g. UK Codes of Corporate Governance, 2010), comprising audit committee size (at least 3 or 2 for small companies), meeting frequency (a minimum of 3 meetings a year), independence (all audit committee members should be non-executive directors) and the presence of a financial expert, are used. A dummy variable is used to indicate the presence of an effective audit committee which fulfils all these conditions. It is expected that effective audit committee will request a higher quality audit to safeguard the shareholder against any financial fraud and irregularities. A similar composite measure of audit committee effectiveness is used by Zaman et al. (2011). However, contrary to the result of their study, this study fails to document the same significant positive relationship between effective audit committee (ACE) and audit fees. Therefore, hypothesis H4, predicting a positive relationship between audit committee effectiveness and audit fees, is rejected. The result may indicate that widespread adoption of the minimum requirements for an effective audit committee as set out by the Codes serves to eliminate fee reductions that were previously enjoyed by better governed companies.

This study also tests the relationship between audit fees and individual audit committee characteristics. In models 1 to 3, the variables measuring audit committee independence, size, finance expertise, activity and commitment are tested against audit fees. Hypothesis H5 predicts that there will be a positive relationship between audit committee independence (measured by the percentage of non-executive directors on audit committee) and audit fee. The

study, however, fails to document any significant positive impact of the percentage of non-executive directors on the audit committee on audit fees. The result of this study is inconsistent with those found in Zaman et al. (2011). Descriptive statistics show that 99% of the sample companies have 100% non-executive membership on their audit committees and the average percentage of non-executive directors on audit committees is 99.7%. Again, widespread adoption of the requirements of the Combined Code of Corporate Governance (2003) and also the UK Corporate Governance Code (2010) has reduced the empirical power, leading to an insignificant result. Therefore, Hypothesis H5 is also rejected.

Hypothesis 6 tests the impact of audit committee size on audit fee. The study documents a significant positive relationship between audit committee size and audit fees. Therefore, Hypothesis H6 is accepted. This finding is supported by Kalbers and Fogarty (1993), who suggest that a large audit committee is more likely to enhance the status and power of the committee within the organisation and demand higher quality audits. The enhanced status and access to more resources enable the audit committee to function effectively, thereby increasing quality of internal governance (Zaman et al., 2011; Pincus et al., 1989). A UK study (Zaman et al., 2011) and US study (Vafeas and Waegelein, 2007) also produced evidence that audit committee size is positively associated with audit fees.

Hypothesis H7 tests the relationship between the proportion of audit committee finance experts on audit committee and audit fees. Models 1 and 2 test the relationship between the proportion of audit committee finance expertise and audit fees. Model 3 provides detailed analysis of finance expertise, which is divided into supervisory expertise and accounting expertise. However, this study fails to find any significant relationship between audit fees and any of the measures of audit committee expertise. The result indicates that audit committee expertise is not an important factor in determining audit pricing decision. Therefore, hypotheses H7a, H7b and H7c are not supported. The result of this study is supported by Zaman et al. (2011), who also found an insignificant relationship.

Hypotheses H8a and H8b test the relationship between audit committee diligence and audit committee commitments and audit fee. It was expected that there would be a positive relationship between number of audit committee meetings (measuring audit committee diligence) and audit fee. The study finds enough evidence to conclude that there is a significant positive relationship between audit fees and audit committee diligence. Therefore Hypothesis H8a is supported. The result of this study is also supported by a US study (Abbott et. al, 2004) and an Australian study (Goodwind-Steward and Kent, 2006). The result implies that active audit committees support the purchase of higher quality audits to complement their monitoring function to safeguard the shareholders against any financial irregularities and fraud. Related to this, hypothesis H8b tests the relationship between audit committee commitment and audit fee. Commitment is measured by the weighted percentage of audit committee members' attendance at the scheduled audit committee meetings. It is expected that audit committee commitment will have a significant positive relationship with audit fees since committed audit committee members will demand higher quality audit from the auditor which will lead to a higher audit fee. As expected, the study finds that audit committee commitment has a significant positive relationship with audit fees at 10% confidence level. Therefore, hypothesis H8b is accepted. This is an important contribution of the study as no previous audit pricing studies have considered audit committee commitment.

This study also considers ownership structure in an audit pricing model. Hypothesis H9a tests the relationship between large blockholder share ownership and audit fee. It is expected that share ownership by large blockholders will have a negative impact on audit fee. This is based on the argument that major shareholders in companies with more concentrated ownership are more likely to be actively involved in monitoring managerial behaviour thus reducing the need for more extensive audit, which will then lead to a lower audit fee. However, this study fails to find any evidence that share ownership by large blockholders has a significant impact on audit fees. The insignificant result is supported by another UK study (O'Sullivan, 2000). Hypotheses H9b and H9c test the relationship between the percentage of executive share ownership and non-executive share ownership and audit fee. It is

predicted that both types of ownership will have a negative relationship with audit fees. As expected, both types of ownership have a significant negative impact on the audit fee. The regression results show that proportion of non-executive director share ownership has a very significant negative relationship with audit fees (at 1% confidence level) while proportion of executive director's share ownership shows a significant negative relationship with audit fees at 10% confidence level. Therefore, both hypothesis H9b and H9c are accepted. The result of this study is supported by O'Sullivan's (2000) finding of a significant negative relationship between both types of share ownership (non-executive and executive share ownership) and audit fee. The result of the study pertaining to executive share ownership implies that insider ownership reduces agency cost as it acts as a substitute for external audit effort in monitoring management and therefore leads to lower audit fee. In the same vein, non-executive directors possessing significant equity shares may have business or family links with the company and consequently behave in a similar manner to their executive director colleagues.

6.4.2 Non-Audit and Audit Fees

Hypothesis H10 tests the relationship between non-audit and audit fees. Additional analysis is run to test the relationship between audit fees and individual components of non-audit service. In earlier models, Log total non-audit fee was used as a control variable to assess the impact of governance and ownership structure on audit fees. Consistent throughout all the models, it is found that log non-audit fees have a very significant and positive impact on audit fees (p=000). Therefore, Hypothesis H10, predicting a positive relationship between non-audit fees provided by the auditor and the audit fee, is accepted. This finding is strongly supported by Hay et al. (2006), who affirm that the majority of studies undertaken between 1977 and 2003 found a positive relationship between non-audit fees and audit fees. Joint provision of non-audit and audit services reduces the price per unit of audit services and triggers the purchase of more audit services (Simunic, 1984; Firth, 2002). In addition, client specific events such as mergers and acquisitions, share issues, implementation of new accounting and information services generate demand for consultancy services and this increases the amount of audit work (Ezzamel et al., 2002; Firth,

2002). A client's financial position and weaknesses are exposed as a result of joint provision of audit and non-audit services; consequently, the auditor may price the risk identified by charging higher audit fees for problematic clients. Monopolistic power over non-audit services also allows the auditor to charge an audit fee premium (Hay et al., 2006), especially with accounting firms increasingly promoting themselves as "one stop" service providers (McMeeking, 2006). The finding of a significant positive relationship contradicts the theoretical logic of a negative relationship between audit fees and non-audit fees as a result of knowledge spillover (Simunic, 1984; Antle et al., 1997; Whisenant et al., 2003; Clatworthy et al., 2002; Antle et al., 2006) and loss leader theory (Hillison and Kennelley, 1988; Hay et al., 2006a). This finding does not support the total prohibition of non-audit service which is proposed by the Green Paper on audit policy (European Commission, 2010) as the provision of non-audit services actually increases the quality of audit service (at least when higher audit fees means more intensive audits).

As additional analysis, individual component of non-audit is tested against audit fees. Individual investigation is possible as the Companies (Disclosure of Auditor Remuneration and Liability Agreements) Regulations 2005 require listed companies to disclose individual non-audit services in their annual report. First, the study predicts a positive relationship between other services supplied pursuant to legislation and audit fees. This study supports the finding that non-audit services supplied pursuant to legislation are an important audit fee determinant. The regression result in model 5 shows that other non-audit services pursuant to legislation have a significant positive impact on audit fees. This is supported by Beattie et al. (1996), who stated that most of the non-audit services provided by auditors are not management consultancy tasks, but instead are essential accounting services that enable listed companies to comply with legal and regulatory requirements. Second, this study predicts a positive relationship between other services relating to taxation and audit fees. The regression results show that non-audit services relating to taxation have a significant positive relationship with audit fees, therefore hypothesis 10c is supported. This is supported by Davis et al. (1993), who found a significant positive relationship between tax services and their measures of audit efforts:

unweighted audit hours, audit hours weighted by billing rate ratios, and audit hours weighted by billing rate. Similarly, Palmrose (1986a) documented that audit fees are even higher when the client purchases non-accounting advisory and tax services from the incumbent auditor. This study also predicts a positive relationship between services relating to corporate finance transactions and audit fees, while a positive relationship between other non-audit services and audit fees is predicted. However, the result for non-audit services relating to corporate finance (LOGCORPFIN) shows no significant impact on audit fees. This is inconsistent with Firth (2002), who predicts that corporate restructuring will result in more audit effort as the auditor will have to learn the new organisational structure and its impact on the financial accounts. Using survey questionnaires to obtain information on the different categories of non-audit services provided by auditors and by non-auditors, Ezzamel et al. (1999) concluded that corporate finance provided by incumbent auditors significantly and positively correlated with audit fees. The regression result shows that other non-audit services have a significant positive impact on audit fees. Other non-audit services here is a combination of many non-audit services, such as services related to pension scheme, information system, actuarial service, SOX related services and other services. As discussed earlier, a client's financial position and weaknesses are exposed as a result of joint provision of audit and non-audit services. As a result, the auditor may price the risk identified by charging higher audit fees for problematic clients. The regression results for other variables are broadly consistent with the results in the main models except for audit committee meetings and audit committee commitment, which are found not significant in model 5. In addition, big four auditor (BIG4) is found to have a significant positive relationship with audit fees.

In addition, this study also tests the relationship between audit fees and the instance where non-audit fee is more dominant than audit fee. A dummy variable (AUDITVSNON) is used to measure this. The regression result in model 6 shows that audit fees has a significant negative relationship with the variable.

Table 6.3 OLS Regressions Explaining the Determinants of Audit Fees for FTSE All Shares for the Years 2007 and 2010

	Model 1 (Pool Data) (n=768)				Model 2 (Pool Data) (n=768)				Model 3 (Pool Data) (n=768)				Model 4 (Pool Data) (n=768)			
	Stand. Coeff	t-value	sig value	VIF	Stand. Coeff	t-value	sig value	VIF	Stand. Coeff	t-value	sig value	VIF	Stand. Coeff	t-value	sig value	VIF
(Constant)		.138	.890			.384	.701			.132	.895			.533	.594	
BOARDSIZE					.042	1.586	.113	1.834								
%INDDIRS	-.024	-1.084	.279	1.307	-.004	-.190	.849	1.432	-.024	-1.069	.286	1.313	-.011	-.497	.619	1.269
DUALITY	-.013	-.647	.518	1.066	-.013	-.641	.521	1.066	-.013	-.653	.514	1.078	-.014	-.698	.486	1.044
BOARDMEET	-.021	-.996	.319	1.160	-.020	-.964	.335	1.167	-.021	-1.003	.316	1.159	-.011	-.539	.590	1.099
ACSIZE	.052	2.285	.023	1.353					.052	2.272	.023	1.354				
%ACNEXEC	-.006	-.320	.749	1.070	-.007	-.352	.725	1.070	-.006	-.319	.750	1.071				
ACMEET	.076	3.325	.001	1.364	.076	3.306	.001	1.379	.076	3.318	.001	1.366				
%ACCOMM	.036	1.754	.080	1.074	.020	.909	.364	1.248	.036	1.757	.079	1.074				
%ACFINEXPERT	.022	.996	.320	1.238	.029	1.461	.144	1.052								
%ACSUEXPERT									.017	.732	.465	1.417				
%ACACCEXPERT									.022	.867	.386	1.648				
ACE													.012	.583	.560	1.081
ABLOCKOWN	.027	1.229	.219	1.266	.026	1.190	.234	1.267	.027	1.245	.214	1.268	.020	.908	.364	1.255
ANEXSHARES	-.060	-2.897	.004	1.127	-.061	-2.944	.003	1.128	-.060	-2.878	.004	1.132	-.057	-2.718	.007	1.115
AEXESHARES	-.035	-1.673	.095	1.127	-.035	-1.703	.089	1.126	-.035	-1.673	.095	1.127	-.037	-1.759	.079	1.124
3YEARSLOSS	-.009	-.392	.695	1.332	-.011	-.498	.619	1.349	-.009	-.385	.701	1.333	.004	.173	.863	1.310
DEBTORS	.141	6.526	.000	1.220	.142	6.557	.000	1.221	.141	6.514	.000	1.221	.151	6.948	.000	1.202
STOCK	-.055	-2.643	.008	1.120	-.051	-2.433	.015	1.144	-.055	-2.636	.009	1.120	-.061	-2.913	.004	1.112
ROA	.003	.134	.893	1.230	.004	.173	.862	1.229	.003	.129	.897	1.232	.013	.606	.545	1.211
GEARING	-.009	-.386	.699	1.273	-.008	-.344	.731	1.280	-.009	-.388	.698	1.273	-.019	-.852	.395	1.253
BUSY	.025	1.181	.238	1.133	.024	1.144	.253	1.133	.025	1.188	.235	1.135	.027	1.309	.191	1.116
REG	-.172	-7.914	.000	1.240	-.169	-7.708	.000	1.250	-.172	-7.896	.000	1.241	-.173	-7.873	.000	1.235
BIG4	.022	1.010	.313	1.229	.022	1.030	.303	1.229	.022	1.019	.309	1.231	.022	1.020	.308	1.236
LONDON	.120	5.527	.000	1.241	.119	5.420	.000	1.252	.120	5.522	.000	1.241	.128	5.857	.000	1.220
LOGDELAY	.037	1.717	.086	1.183	.035	1.622	.105	1.181	.037	1.719	.086	1.184	.040	1.885	.060	1.175
LOGTOTASSETS	.635	20.733	.000	2.450	.624	18.690	.000	2.899	.635	20.654	.000	2.466	.673	23.294	.000	2.124
UKSUBS	-.036	-1.704	.089	1.149	-.035	-1.648	.100	1.148	-.036	-1.707	.088	1.155	-.036	-1.709	.088	1.146
USSUBS	.178	8.405	.000	1.167	.178	8.402	.000	1.168	.178	8.387	.000	1.169	.182	8.515	.000	1.161
LOGTOTNONAUDIT	.160	7.079	.000	1.338	.161	7.092	.000	1.338	.160	7.065	.000	1.338	.159	6.924	.000	1.341
PERIOD (2010)	.019	.871	.384	1.188	.021	.985	.325	1.221	.019	.864	.388	1.211	.012	.590	.555	1.115
R square	0.744				0.743				0.744				.736			
Adj.R square	0.734				0.733				0.733				0.727			
F Value	74.734				74.33				71.84				85.23			
Durbin Watson	2.034				2.027				2.033				2.037			

This result implies that when non-audit service is dominant, the auditor will give a price discount to their audit client. Both models produce a high R square value of 0.743 and 0.734 and F value of 66.264 and 70.96 respectively, showing that the models are statistically valid and have high explanatory power.

Table 6.4: OLS Regressions Explaining the Determinants of Audit Fees (Details of Non-Audit) for FTSE All Shares for the Years 2007 and 2010

	Model 5 (n=768)				Model 6(n=768)			
	Stand. Coeff	t-value	sig value	VIF	Stand. Coeff	t-value	sig value	VIF
(Constant)		.938	.349			-.234	.815	
BOARDSIZE	-.023	-1.014	.311	1.308	-.024	-1.059	.290	1.307
%INDDIRS	-.020	-.967	.334	1.066	-.017	-.817	.414	1.065
BOARDMEET	.000	-.022	.982	1.152	.006	.284	.776	1.155
ACSIZE	.053	2.305	.021	1.359	.060	2.569	.010	1.352
%NEXEC	-.004	-.185	.854	1.070	-.002	-.097	.923	1.069
ACMEET	.029	1.167	.244	1.596	.066	2.834	.005	1.361
%ACCOMM	.030	1.447	.148	1.078	.037	1.781	.075	1.074
%ACFINEXPERT	.020	.921	.357	1.239	.016	.732	.464	1.240
ABLOCKOWN	.038	1.698	.090	1.273	.030	1.318	.188	1.266
ANEXSHARES	-.080	-3.791	.000	1.140	-.068	-3.207	.001	1.122
AEXESHARES	-.038	-1.785	.075	1.152	-.022	-1.051	.294	1.135
3YEARSLOSS	-.006	-.276	.782	1.331	.000	.002	.999	1.334
DEBTORS	.158	7.293	.000	1.219	.142	6.396	.000	1.231
STOCK	-.047	-2.274	.023	1.124	-.048	-2.252	.025	1.124
ROA	.009	.396	.692	1.231	.003	.128	.898	1.231
GEARING	.004	.185	.853	1.292	-.006	-.271	.787	1.275
BUSY	.031	1.488	.137	1.137	.029	1.369	.171	1.134
REG	-.164	-7.446	.000	1.258	-.179	-8.085	.000	1.236
BIG4	.052	2.446	.015	1.178	.061	2.792	.005	1.181
LONDON	.117	5.328	.000	1.245	.116	5.234	.000	1.244
LOGDELAY	.029	1.366	.173	1.195	.038	1.771	.077	1.183
LOGTOTASSETS	.611	18.902	.000	2.702	.689	23.009	.000	2.255
UKSUBS	-.020	-.968	.334	1.151	-.029	-1.370	.171	1.146
USSUBS	.176	8.268	.000	1.173	.178	8.228	.000	1.172
LEGIST(M)	.050	1.982	.048	1.646				
TAX(M)	.105	4.298	.000	1.556				
CORPFIN(M)	.000	.007	.995	1.122				
OTHERSERVICE(M)	.064	2.711	.007	1.422				
AUDITVSNON					-.100	-4.806	.000	1.099
PERIOD	.013	.588	.557	1.186	-.009	-.429	.668	1.186
R square	.743				0.734			
Adj.R square	.731				0.724			
F Value	66.264				70.96			
Durbin Watson	2.07				1.976			

6.4.3 Economic Crisis Effect

Hypothesis H11a tests whether the relationship between governance characteristics and audit fees is stronger after the economic crisis. Table 6.5 shows the regression results of two models testing the relationship between various audit fees determinants and audit fee. Model 7 is for the regression result for the year 2007 (pre-economic crisis period) while model 8 shows the 2010 result (post-economic crisis period). The regression results show that the impact of board independence and board activity on audit fee remains insignificant for both periods, with p value of more than 0.1. With regards to the audit committee characteristics, it is found that audit committee size and audit committee activity or diligence have significant positive impact on audit fees before the economic crisis (2007). However, the significant positive relationships found earlier (2007) between audit fees and two of audit committee characteristics, audit committee size (ACSIZE) and audit committee activity (ACMEET) disappear in the year 2010. Taken together, the regression results show that the relationship between governance characteristics (board characteristics and audit committee characteristics) is weaker after the economic crisis as compared to before the economic crisis. Therefore, Hypothesis H11a is rejected. The insignificant result in 2010 is inconsistent with Zaman et al. (2011), who found a significant relationship between governance characteristics (especially audit committee characteristics and audit fees). The significant relationship found in Zaman et al. (2011) may be because the study utilised governance data from 2001 to 2004, before the full implementation of the Smith Report (2003), when some of the recommendations had not yet been enforced. This study (for the 2010 analysis) uses data produced seven years after the publication of the report (Smith Report, 2003). Hence, it is believed that Smith's recommendations regarding audit committee effectiveness have been widely adopted by UK listed companies. This is confirmed by descriptive statistics showing that in 2010, 89% of the sample firms had effective audit committees as compared to the finding of 16% by Zaman et al. (2011) a year after the implementation of Smith Report (2003). The economic crisis and consequently the failure of many companies puts additional pressures on the companies to follow the requirement of the Codes and also guidance on the audit committee as close as possible to avoid being

blamed by the shareholders for ineffective Corporate Governance. Therefore, the variation between companies, especially after the economic crisis, is likely to be small and this weakens the power of the empirical tests. In a study on the impact of governance characteristics during the post-Cadbury period, O'Sullivan (1999) also found an insignificant relationship, whereby none of his board and audit committee characteristics had a significant impact on audit fees, despite the increased emphasis on internal governance mechanisms. Hypothesis 11b tests whether the relationship between non-audit fees and audit fees is stronger after the economic crisis. The results in table 6.4 show that non-audit fees remain as a very significant audit fee determinant, even after the economic crisis. Therefore, hypothesis H11b, predicting that the relationship between audit fees and non-audit fees is stronger after the economic crisis, is rejected.

For the control variable, table 6.4 shows that company size (LOGTOTASSETS) continues to have a significant impact on audit fees in 2010. This is supported by many prior audit pricing studies, such as those of Low et al. (1990), Firth (1997), Carson et al. (2004) and Lawrence et al. (2011), which find that the size of the client as measured by their total assets is the major factor in determining the audit fee. It seems that economic factors do not have any impact on the relationship between audit fees and company size, as company size continues to significantly affect audit pricing. This is consistent with the expectation that the bigger the company, the more audit effort is needed in auditing the financial statements in the form of testing and analysis of data and information (Simunic, 1980; Firth, 1985; Chan et al., 1993; Pong and Whittington, 1994; Simon, 1995; Firth, 1997; Adams et al., 1997). For 2010, the variables measuring client complexity, USSUBS, consistent with the 2007 result, show a positive significant impact on audit fees. This proves that in 2010 auditors continued to consider companies with many subsidiaries, especially those with US subsidiaries, as more complex, and were charging higher audit fees. This is because audits of accounts of companies with many subsidiaries require a greater degree of testing and effort across all subsidiaries, involving a variety of statutory and disclosure requirements, and hence incurring higher fees. In addition, the auditor also has to bear inquiry costs and to deal with intra group transactions, which could complicate the auditing process. The industry in which

the client operates also determines the audit fees charged by an auditor. This study finds evidence that in 2010, regulated industries (REG) paid less in audit fees than their non-regulated counterparts. This finding is consistent with the 2007 result and with the finding by Ezzamel et al. (1996), O'Sullivan (1999) and O'Sullivan (2000) that audit fees are typically lower among companies operating in regulated industries. The results on variables measuring company risk are mixed with the inventory over total assets ratio (STOCK), existence of loss in the current year (LOSS10) and gearing ratio (GEARING), showing an insignificant relationship. The results on both gearing ratio (GEARING) and LOSS10 are consistent with 2007. It could be concluded that in 2010 there is no evidence to suggest that auditors saw the stock to total assets ratio and the incidence of loss in the current year as an important indicator of client riskiness or charged higher audit fees accordingly. This is supported by the finding of Carcello et al. (2002) that stock to total assets ratio has no significant relationship with audit fees. It seems that since the economic crisis the gearing ratio has become less important in auditors' determination of pricing. This finding is inconsistent with studies in the Netherlands, Australia and Bahrain (Langendijk, 1997; Francis and Stokes, 1986; Joshie and Al-Bastaki, 2000), which reported a significant positive relationship between gearing ratio and audit fees. The debtors to total assets ratio (DEBTORS) shows a significant positive impact on audit fees. This result is consistent with the result for 2007 and supported by Simunic (1980), who considered receivables as "risky" balance sheet items that generally represent a material portion of the balance sheet figure and could increase the level of audit effort and also the risk of a material misstatement due to items being missed by the auditor. Similar to the results of the 2007 analysis, this study finds that in 2010 the length of delay between a company's financial year-end and the signing of the audit report had a positive impact on the audit fees; however, the relationship is not significant. This finding is inconsistent with the prior expectation that report lag would have a significant positive impact on audit fees as a longer time is taken, most likely because of the need for more audit testing and investigation. This result does not support the finding by Chan et al. (1993), Ezzamel et al. (1996) and O'Sullivan (2000) of a significant positive relationship between report lag and audit fees. Similarly, no evidence is found in either period that audits undertaken in the

busy period (i.e. between 31st December and 31st March) attract an audit fee premium, although it was predicted that auditing during the auditing busy season (normally at the beginning of the calendar year) could lead to higher audit fees. This finding is supported by O'Sullivan (1999 and 2000), who also failed to find any evidence that auditing during the busy season has a significant impact on audit fees. In respect to auditor-related variables, this study finds no evidence that big audit firms (BIG4) have a significant positive impact on audit fees in both periods. Like the 2007 analysis, this study also finds evidence that in 2010 the location of the auditor affected audit pricing. It is found that auditors with a London address (LONDON) charge significantly higher audit fees to their audit clients than their regional counterparts. This is consistent with other UK studies, such as those of Chan et al. (1993), Ezzamel et al (1996), O'Sullivan (2000) and Chaney et al. (2004), who found a significant positive relationship between audit fees and whether the auditor was based in London.

Table 6.5: OLS Regressions Explaining the Determinants of Audit Fees for FTSE All Shares for the Year 2007 (Pre Economic Crisis) and 2010 (Post Economic Crisis)

	model 7 (Pre-crisis 2007) (n=384)				Model 8 (Post crisis 2010) (n=384)			
	Stand. Coeff	t-value	sig value	VIF	Stand. Coeff	t-value	sig value	VIF
(Constant)		.430	.668			-.415	.678	
%INDDIRS	.002	.082	.934	1.318	-.053	-1.548	.123	1.332
DUALITY	-.027	-.988	.324	1.101	.003	.083	.934	1.210
BOARDMEET	-.021	-.739	.461	1.167	-.019	-.574	.566	1.217
ACSIZE	.066	2.065	.040	1.525	.033	.957	.339	1.340
%ACNEXEC	-.007	-.247	.805	1.144	-.006	-.183	.855	1.332
ACMEET	.094	3.057	.002	1.414	.057	1.638	.102	1.371
%ACCOMM	.031	1.067	.287	1.235	.010	.335	.738	1.072
%ACFINEXPERT	.028	1.018	.309	1.128	.048	1.538	.125	1.105
ABLOCKOWN	.014	.490	.624	1.261	.041	1.192	.234	1.322
ANEXSHARES	-.048	-1.728	.085	1.170	-.070	-2.225	.027	1.124
AEXESHARES	-.050	-1.748	.081	1.223	-.020	-.641	.522	1.118
3YEARSLOSS	-.013	-.465	.642	1.183	-.012	-.320	.749	1.507
DEBTORS	.150	5.117	.000	1.285	.133	4.047	.000	1.213
STOCK	-.054	-1.921	.056	1.161	-.054	-1.668	.096	1.165
ROA	-.015	-.531	.596	1.192	.017	.503	.615	1.332
GEARING	-.002	-.067	.947	1.324	-.020	-.599	.550	1.296
BUSY	.042	1.528	.127	1.130	.000	-.003	.998	1.172
REG	-.195	-6.692	.000	1.271	-.137	-3.983	.000	1.325
BIG4	.005	.178	.858	1.301	.034	1.029	.304	1.204
LONDON	.119	4.073	.000	1.270	.123	3.672	.000	1.259
LOGDELAY	.034	1.212	.227	1.175	.042	1.281	.201	1.232
LOGTOTASSETS	.607	14.098	.000	2.758	.656	14.659	.000	2.245
UKSUBS	-.039	-1.394	.164	1.145	-.039	-1.170	.243	1.264
USSUBS	.179	6.314	.000	1.194	.182	5.627	.000	1.176
LOGTOTNONAUDIT	.165	5.086	.000	1.568	.165	4.933	.000	1.255
R square	0.783				0.713			
Adj.R square	0.766				0.690			
F Value	46.684				31.958			
Durbin Watson	2.093				2.004			

6.4.4 Test of Robustness

As a robustness measure and to improve understanding, this study re-runs the main regression model to test for the impact of using other measures of company size, industry effect and client complexity on the audit fee. Table 6.6 presents details of the regression models. In model 9, a dummy variable FINANCIALS (indicating whether the company is a financial company or not) has been included in the model to replace variable REG which indicates whether the companies are in regulated industries. The regression result shows that variable FINANCIALS has a significant negative relationship with audit fee. The result indicates that financial companies enjoy price discounts from the auditor. As stated earlier in the discussion of main regression models, less audit work is needed for financial institutions as regulated companies are closely governed by oversight bodies. In addition, regulatory oversight partially substitutes the external auditors as a monitoring mechanism, which leads to lower audit fees. Model 9 also substitutes the variable USSUBS (the number of US Subsidiaries) with OSSUBS (the number of over-sea subsidiaries). As expected, the number of overseas subsidiaries has significant positive impact on audit fees, similar to the impact of the number of US subsidiaries on audit fees. Other variables show consistent results with the main regression models.

Model 10 replaces the measure of company size, log total assets with log turnover. As expected, log turnover also has a very significant positive relationship with audit fee (p=0.000). The result is consistent with other studies like Chan et al. (1993), Collier and Gregory (1996) and Owusu-Ansah et al. (2010). It is interesting that one of the board variables, the annual number of board meetings, now shows a very significant positive impact on audit fees. In addition, return on asset ratio and busy period also show a very significant impact on audit fees. Contrary to other models, it is found that the variable measuring regulated industries no longer has a significant impact on audit fee. Other variables behave similarly to the main model. The F-statistics for both models are significant at one percent level, suggesting that the models are statistically valid. Table 5.4 also shows that both models 9 and 10 have a very high R square value at 0.746 and 0.744 respectively, showing that each model

has a high explanatory power. There are no heteroscedasticity problems as Durbin Watson values show a figure around 2 (2.071 and 2.034 respectively).

This study also re-ran the regression using different variations of ownership structure variables (see Appendix 3). The regression model used the number of multiple large shareholders or the number of shareholders holding 3% or more shares and the proportion of non-executive and executive directors holding company shares. Contrary to expectation, the regression result shows that the number of blockholders or large shareholders has significant positive impact on audit fees. The result is inconsistent with Adelopo et al. (2012), who found a significant negative relationship between audit fees and number of blockholders. Proportion of non-executive and executive directors holding company shares are both found to be not significantly related to audit fees. The results of other variables are consistent with results for the main models.

It is argued that larger firms behave differently as compared to smaller firms in terms of their demand for audit quality. Following the example of a previous UK study (e.g. Zaman et al., 2011) that separated the sample into small and larger firms, this study also runs separate regressions for larger and smaller firms by splitting the sample companies into two parts, based on the median of total assets. Models 11 and 12 represent small and big companies respectively. For small companies, the log total asset shows a very significant positive impact on audit fees. The same significant positive relationship with audit fee is found for log total non-audit fees and the number of US subsidiaries. As expected, this study finds enough evidence to argue that the proportion of assets represented by debtors and regulated companies has a very significant positive impact on audit fees in smaller companies. Contrary to the result of the pooled data (main models), it is found that the proportion of assets represented by stocks is not significantly related to audit fee. Other measures of client riskiness and profitability (3 YEARSLOSS, ROA and GEARING) show consistent results with the main model based on pooled data. In terms of auditor related variables, this study documents a very interesting finding on big four audit firms (BIG4). Contrary to the finding in the main model, this study finds enough evidence to conclude that big four audit firms charge higher audit fees to their small audit

clients (p=0.031). This result is consistent with previous studies (e.g. Francis, 1984; Francis and Stokes, 1986; Palmrose, 1986; Francis and Simon, 1987; Lee, 1996; McMeeking et al, 2006) that have documented that relatively small companies had a positive relationship with audit fees. The positive relationship among smaller clients reflects the effect of product differentiation of the auditor rather than abuse of monopolistic power (McMeeking et al., 2006). Similar to the main models, auditor with a London address (LONDON) has a very significant positive impact on audit fees. This result implies that auditors with a London address also charge higher audit fees to their smaller size clients. None of the board variables show any significant impact on audit fees. As for audit committee characteristics, the regression results show that audit committee diligence, measured by annual number of audit committee meetings (ACMEET), has a very significant impact on audit fees. Besides diligence, this study also documents that audit committee commitment (ACCOMM) has a positive and significant relationship with audit fees. These two regression results imply that diligent and committed audit committees in the small companies segment require higher quality audits that lead to higher audit fees.

For big companies, the log total asset also shows a very significant positive impact on audit fees. Similar to the small companies segment, the same significant positive relationship with audit fee is found for log total non-audit fees and number of US subsidiaries. For client riskiness variables, this study finds enough evidence to conclude that the proportion of assets represented by debtors has a very significant positive impact on audit fees. Contrary to the result for the small companies segment, it is found that the proportion of assets represented by stocks is negative and significantly related to audit fee. This negative relationship could be the result of the relative ease of auditing with the availability of auditing technology, which enables the auditor to give price discounts to their audit clients in the big companies segment. Another interesting finding for the big companies segment is that incidence of any loss in the past three years (3YEARSLOSS) shows a significant positive impact on audit fee. This result implies that auditors charge higher audit fees for big companies that have experienced any loss in the past three years. Similar to the small companies segment and the main models, other measures of client riskiness and profitability

show insignificant impact on audit fee. Similar to small companies, regulated companies among big companies are paying less audit fees as a result of closer supervison by regulatory bodies. For auditor characteristics, it is found that only auditor with London address has a significant positive impact on audit fees while Big4 auditor has no significant impact on audit fee. The insignificant impact of Big4 auditors on audit fees in the big companies segment could be explained by the fact that price discount as a result of economies of scale is offset by the price premium for Big four auditors (Francis and Stokes, 1986). This is supported by Simunic (1980), Simon (1986), Francis and Stokes (1986) and Palmrose (1986), who found that auditor size was not significant in cases of very large companies. Governance characteristics and ownership structure wise, it is found that contrary to the result for the small companies segment and also the main models, CEO duality shows a very significant negative impact on audit fees. The result is consistent with Bliss (2011), who claimed that CEO duality constrains board independence. In addition, in the presence of a dominant CEO, non-executive directors are expected to have reduced influence in seeking an intensive audit and this leads to lower audit fees (Desender et al., 2009; O'Sullivan, 2000). For audit committee characteristics, only audit committee size and annual number of audit committee meetings are found to have significant and positive impact on audit fees. The results imply that in the big companies segment, audit committees which are bigger in size and more diligent require higher quality audits and this leads to higher audit fees. In contrast to the result in the small companies segment and the main models, none of the ownership structure variables show a significant impact on audit fee.

Table 6.6 OLS Regressions Explaining the Determinants of Audit Fees For FTSE All Shares for the Years 2007 and 2010 (Robustness Test)

	Model 9 (Pool Data) (n=768)				Model 10 (Pool Data) (n=768)				Model 11(Small companies) (n=384)				Model 12 (Big companies) (n=384)			
	Stand. Coeff	t-value	sig value	VIF	Stand. Coeff	t-value	sig value	VIF	Stand. Coeff	t-value	sig value	VIF	Stand. Coeff	t-value	sig value	VIF
(Constant)		1.146	.252			3.103	.002			-1.304	.193			1.028	.305	
%INDDIRS	-.021	-.952	.341	1.306	.031	1.336	.182	1.271	-.030	-.740	.460	1.231	-.022	-.605	.546	1.362
DUALITY	-.018	-.897	.370	1.067	-.015	-.719	.473	1.067	.036	.919	.359	1.163	-.092	-2.726	**.007**	1.201
BOARDMEET	-.023	-1.085	.278	1.160	-.063	-2.886	.004	1.148	.007	.189	.850	1.183	-.039	-1.141	.255	1.220
ACSIZE	.044	1.957	.051	1.355	.056	2.366	.018	1.353	.007	.170	.865	1.240	.072	2.082	**.038**	1.242
%ACNEXEC	-.013	-.630	.529	1.069	-.006	-.308	.758	1.069	-.006	-.161	.872	1.109				
ACMEET	.081	3.578	.000	1.361	.116	4.970	.000	1.321	.085	2.109	**.036**	1.230	.114	3.100	**.002**	1.419
%ACCOMM	.034	1.682	.093	1.070	.029	1.356	.176	1.073	.078	2.045	**.042**	1.096	.035	1.075	.283	1.093
%ACFINEXPERT	.018	.821	.412	1.238	.004	.167	.868	1.230								
%ACSUEXPERT									.019	.428	.669	1.479	-.017	-.461	.645	1.456
%ACCEXPERT									.044	.976	.330	1.544	-.001	-.034	.973	1.681
ABLOCKOWN	.018	.817	.414	1.268	-.022	-.991	.322	1.227	.067	1.705	**.089**	1.173	.012	.349	.727	1.299
ANEXSHARES	-.059	-2.852	.004	1.126	-.067	-3.124	.002	1.126	-.122	-3.072	**.002**	1.208	-.045	-1.396	.164	1.096
AEXESHARES	-.044	-2.124	.034	1.129	-.028	-1.282	.200	1.135	-.113	-2.856	**.005**	1.192	-.023	-.680	.497	1.242
3YEARSLOSS	-.003	-.121	.904	1.351	.024	1.008	.314	1.378	-.027	-.631	.529	1.437	.062	1.799	**.073**	1.260
DEBTORS	.139	6.434	.000	1.223	.034	1.535	.125	1.185	.188	4.694	**.000**	1.216	.149	4.219	**.000**	1.309
STOCK	-.043	-2.095	.037	1.120	-.076	-3.507	.000	1.151	-.005	-.134	.894	1.112	-.111	-3.147	**.002**	1.295
ROA	-.014	-.637	.524	1.240	-.080	-3.590	.000	1.207	-.021	-.497	.620	1.362	-.039	-1.070	.286	1.397
GEARING	-.012	-.559	.576	1.285	.035	1.555	.120	1.245	.045	1.116	.265	1.245	.006	.163	.870	1.192
BUSY	.017	.841	.400	1.133	.050	2.346	.019	1.123	-.002	-.059	.953	1.188	.056	1.617	.107	1.249
FINANCIALS	-.154	-7.198	.000	1.205					-.105	-2.641	.009	1.209	-.263	-7.418	**.000**	1.310
REG					-.001	-.058	.953	1.229								
BIG4	.021	.980	.327	1.229	.025	1.114	.266	1.229	.092	2.170	.031	1.359	-.026	-.751	.453	1.261
LONDON	.125	5.745	.000	1.243	.141	6.256	.000	1.227	.182	4.404	**.000**	1.296	.091	2.681	**.008**	1.197
LOGDELAY	.020	.930	.353	1.200	.000	.011	.991	1.184	.060	1.550	.122	1.159	.007	.204	.838	1.199
UKSUBS	-.031	-1.513	.131	1.131	-.036	-1.682	.093	1.138	-.029	-.726	.468	1.244	-.029	-.883	.378	1.149
OSSUBS	.206	9.635	.000	1.201												
USSUBS					.178	8.402	.000	1.168	.196	5.055	**.000**	1.143	.197	5.759	**.000**	1.223
LOGTOTNONAUDIT	.171	7.614	.000	1.331	.202	8.742	.000	1.293	.128	3.129	**.002**	1.265	.223	6.510	**.000**	1.227
LOGTOTASSETS	.590	19.148	.000	2.506					.512	11.752	**.000**	1.443	.438	10.342	**.000**	1.873
TURNOVER					.482	16.912	.000	1.967								
PERIOD	.016	.744	.457	1.190	-.004	-.201	.841	1.200								
R square	0.746				0.744				0.564				0.702			
Adj.R square	0.736				0.734				.529				.678			
F Value	75.68				74.734				16.489				29.358			
Durbin Watson	2.071				2.034				1.938				1.941			

6.5 Chapter Summary

The chapter discusses empirical results of the study. The empirical results are divided into descriptive analysis, correlation coefficients and regression results. Descriptive statistics are used to explore the data. In descriptive analysis, details of sample firms are first presented. The study focuses on 384 final samples of FTSE companies, with all shares listed on the London Stock Exchange on 31st December 2007, drawn from 10 different industries. This is followed by descriptive statistics on all variables used in the regression models, including control variables. For each variable, mean, median, standard deviation, min and max values are presented in table 6.1 and this is followed by a write-up describing the values found.

The analysis chapter continues with correlation coefficient results based on Pearson correlations. Table 5.2 presents correlation results for all variables used in the regression models. The analysis is important to selection of suitable variables for later inclusion in the regression models. Any highly correlated independent variables (r=0.8 and above) are excluded from regression models, to avoid multicollinearity problems. No significant correlation is found between independent variables. However, significant correlation (r=0.8 and above) is found between some related variables due to singularity (e.g. between REG and FINANCIAL). Singularity occurs when one independent variable is actually a combination of other independent variables. As multiple regression does not relate well to multicollinearity or singularity, variables with high singularity problems are not included in the same regression model.

The relationship between audit fees and governance as well as ownership structure is tested using four main regression models. The first model is developed to test the relationship between the dependent variable LOGAUDIT and board characteristics, audit committee characteristics, ownership structure variables. Included in the models are control variables to control for client-related variables, auditor-related variables and engagement related variables. This is followed by another model where the audit committe size is replaced by board size since both variables cannot be included in the same model due to the

quite high correlation coefficient between the two variables. The third model splits the audit committee expertise into supervisory finance expertise and accounting finance expertise. Finally, the last model tests the relationship between audit fees and audit committee effectiveness (ACE), replacing individual audit committee characteristics with composite variables measuring audit committee effectiveness. The relationship between audit fees and non-audit fees is tested in models 5 and 6. Model 5 tests the relationship between audit fees and individual non-audit fees while model 6 tests the relationship between audit fees and instances where non-audit services cost more than audit fees. It can be summarised from the regression results that the R square value of all models ranges from 0.736 to 0.908, while the F value is significant at 1% confidence level, with a minimum value of 16.7 and a maximum value of 85.23. The results for all models are broadly consistent with existing research. Both audit client size and complexity have a positive and significant impact on audit fees. However, the variables measuring client riskiness show mixed results, with the ratio of debtors to total assets (DEBTORS) having a positive and significant impact on audit fees, while the stock to total assets ratio (STOCKS) shows a significant negative impact on audit fees. The variables measuring client profitability/loss show an insignificant impact on audit fees. Consistent with prior research, such as that of O'Sullivan (2000), this study finds that London-based auditors charge their audit clients higher audit fees than their regional counterparts. Consistent with most prior literature, this study finds that non-audit fees have a significant positive impact on audit fees. It is also found that management ownership and non-executive share ownership has a significant negative impact on audit pricing. None of the board characteristics variables, including board size, board independence (%NEXEC and %INDIRS) and board diligence (BOARDMEET), is found to have a significant impact on audit fees across the four main models tested. On the other hand, three audit committee characteristics variables: audit committee size, audit committee diligence (ACMEET) and audit committee commitment, are found to have a significant impact on audit fees. As for the detailed non-audit fees variable, it is found that other services supplied pursuant to legislation (LEGIST(M)), other services relating to taxation (TAX(M)) and other non-audit services

(OTHERSERVICE(M)) have a significant positive impact on audit fees while other services relating to corporate finance are not significant.

Additional analysis reveals that when total non-audit fees are greater than the audit fees (AUDITVSNON) this has a significant negative impact on audit fees, signalling that auditor independence might be affected when non-audit services provided by the auditor to their audit client exceed the audit service itself. The regression results and the hypotheses tested are summarised in Table 6.7. This study runs separate analyses to test the impact of economic crisis on the relationship between audit fees and governance characteristics and the relationship between audit fees and non-audit. The regression results show that the economic crisis has not had any significant impact on either relationship.

Finally, robustness is tested by splitting the sample into small and big company segments; the use of variations of client size, industry and ownership structure variables is employed to increase understanding of the relationship between audit fees and various audit fee determinants.

Table 6.7: Summary of Results

Research objective / Hypothesis	Characteristics measured	Significance	Accepted/Rejected
Research Objective 1			
H1a: There will be a positive relationship between the proportion of non-executives serving on a company's board and the audit fee.	Board independence	No	Rejected
H1b: There will be a positive relationship between the proportion of independent non-executives serving on a company's board and the audit fee.		No	Rejected
H1c: There will be a positive relationship between the existence of CEO duality and the audit fee.		No	Rejected
H2: There will be a positive relationship between the board size and the audit fee.	Board Size	No	Rejected
H3: There will be a positive relationship between the number of board meetings and the audit fee.	Board diligence	Yes	Accepted
Research Objective 2			
H4: There will be a positive relationship between audit committee effectiveness and the audit fee.	Audit committee effectiveness	No	Rejected
H5: There will be a positive relationship between audit committee independence and the audit fee.	Audit committee independence	No	Rejected

H6: There will be a positive relationship between audit committee size and audit fee.	Audit committee size	No	Rejected
H7 : There will be a positive relationship between the number of financially qualified members of audit committee and the audit fee.	Audit committee expertise	No	Rejected
H8 a: There will be a positive relationship between the number of audit committee meetings and the audit fee	Audit committee diligence	Yes	Accepted
H8 b: There will be a positive relationship between the percentage of attendance by members of the audit committee attending all meetings and the audit fee.	Audit committee commitment	Yes	Accepted
Research Objective 3			
H9a: There will be a negative relationship between ownership by large blockholders and the audit fee.	Blockholder ownership	No	Rejected
H9b: There will be a negative relationship between the percentage of executive ownership and the audit fee.	Management ownership	Yes	Accepted
H9c: There will be a negative relationship between the percentage of non-executive ownership and the audit fee.	Non-executive ownership	Yes	Accepted

Research Objective 4			
H10: There will be a positive relationship between total non-audit fees provided by the auditor and the audit fee	Non-audit fees	Yes	Accepted
Research Objective 5 and 6			
H11a: The relationship between governance characteristics and audit fees is stronger after the economic crisis.	Economic effect	The relationship is weaker after the economic crisis.	Rejected
H11b: The relationship between non-audit fees and audit fees is stronger after the economic crisis.	Economic effect	The relationship remain strong before and after economic crisis	Rejected

CHAPTER 7: CONCLUSIONS

7.1 Introduction

Following the increase in concern regarding corporate governance, especially due to the numerous corporate scandals and collapses (e.g. Enron, WorldCom and Lehman Brothers in the US and Northern Rock in the UK), understanding the role of external auditors in ensuring the transparency of Financial Statements and the relationship between relevant governance characteristics and audit quality, typically proxied by audit fees, has become more relevant. A few studies (e.g. O'Sullivan 1999; O'Sullivan, 2000; Goddard and Master, 2000; Peel and Clatworthy, 2001; O'Sullivan and Diacon, 2002; Zaman et al., 2011 and Adelopo et al., 2012) based on the UK have examined the relationship between governance characteristics and audit fees. With the exception of Adelopo et al. (2012) and Zaman et al. (2011), who utilise data from the years 2005/2006 and the period between 2001-2004 respectively, most of the research in the UK concerning governance characteristics and audit pricing has used data from the 1990s. Governance reforms, and particularly those introduced in the 2000s, may have created a different relationship between governance characteristics and audit fees from that found in earlier studies. In addition, prior studies only focus on certain aspects and do not include comprehensive governance characteristics in their study (e.g. Zaman et al. only focused on audit committee effectiveness while Adelopo focused on multiple large shareholders). Therefore, the aim of this study was to fill the research gap by providing more contemporary data based on the years 2007 and 2010 and to include more comprehensive governance characteristics.

The controversial corporate collapses and scandals that have occurred since the early 2000s have negatively affected the reputation of auditors, especially as most of the companies failed shortly after receiving a clean report from their auditors. The issue of independence in appearance and independence in fact of the auditors is now subject to increased discussion and investigation (e.g., Srinidhi and Gul, 2007; Lim and Tan, 2008; Krishnan et al., 2005; Francis and Ke, 2006). The provision of non-audit services may tarnish the independence of the auditor in

terms of passing judgment on whether a financial statement is a true and fair view and disclosing any risk or possibility of going concern issues. This being the case, the payment of higher non-audit fees to auditors is expected to reduce the amount of audit work and investigation, leading to lower audit fees. Responding to this scenario, this study investigates the impact of total non-audit fees on total audit fees. The relationship between audit fees and non-audit fees and whether the provision of non-audit fees actually has a negative relationship with audit fees and consequently affects auditor independence are extremely interesting areas for investigation.

In addition, on a more specific level, the new requirement for disclosure of details of audit fees in companies' annual reports in The Companies (Disclosure of Auditor Remuneration and Liability Agreements) Regulations 2005, later superseded by The companies (Disclosure of Auditor Remuneration and Liability Agreements) Regulations 2008 provides the opportunity for this study to investigate individual relationships between audit fees and specific components of non-audit fees.

The conclusion chapter next presents a summary of the results from the previous chapter. This is followed by discussion of the theoretical and policy implications of the study. Finally, limitations of the current study and avenues for future research are highlighted.

7.2 Summary of the Empirical Findings

The first research objective is to investigate the relationship between companies' internal governance characteristics, which comprise the board of directors and the audit committee and audit quality, proxied by the audit fees paid by listed companies in the United Kingdom. The data are drawn from 384 companies listed in the FTSE All Shares Index, excluding investment holdings, which remained in the FTSE All Shares Index until 2010.

The first step of the analysis was to assess the impact of an effective board of directors on audit fees. Results of this study show that the presence of Independent non-executive directors on the board (based on % of non-executive directors, % of independent non-executive directors) had no significant impact on

the total fee paid to external auditors. This finding does not support the recommendation by the Cadbury Committee and the combined codes that non-executive directors should play a crucial role in the oversight of management and that non-executive directors tend to purchase more services from external auditors as a sign of their competence and possibly of their diligent attitude towards reporting and auditing quality. The presence of more independent non-executives may mean more coverage in the auditing and reporting sense. This result is inconsistent with Lee and Mande (2004) and Collier and Gregory (1999) but is supported by O'Sullivan (1999) and Peel and Clatworthy (2001), who also found no evidence that board independence influences auditors' pricing decisions in their studies covering large UK companies in the post-Cadbury period. Inconsistent with Bliss et al. (2007) and Zaman et al. (2011), this study finds no evidence that CEO/chairman duality (for either year) has a significant impact on audit fees. This result is, however, consistent with another UK study, based on 402 UK quoted companies in 1992 (O'Sullivan, 2000). Similar to previous studies (e.g. Boo and Sharma, 2008 and Adelopo and Jallow, 2008), this study finds that board size has no significant impact on audit fees. This is inconsistent with the notion that more experienced and larger boards could enhance board effectiveness; thus a higher quality audit would be required, leading to higher audit fees. The results of the remaining board characteristics, such as board diligence also show no significant impact on audit fees in either 2007 or 2010.

Audit committees have come under scrutiny from many interested parties, especially the regulators. It has been suggested that the main board should delegate its financial oversight functions to the audit committee. However, other writers have argued that the committee is no more than a ceremonial group and that it is not an effective means of constraining management and may be even less effective in ensuring reporting and audit quality (Sommer 1991; Menon and Williams, 1994). Therefore, the second research objective is to analyse the impact of an effective audit committee on audit fees. This study finds that audit committee size has a significant positive impact on audit fees. This is consistent with the notion that larger audit committees are likely to flex their power and status and demand higher quality audit to reflect their effective monitoring role. This result is supported by Vafeas and Waegelein (2007), Boo and Sharma (2009)

and Zaman et al. (2011). This study also documents that audit committee meetings have a significant positive impact on total fees paid to auditors. This is consistent with prior studies by such as Abbott et al. (2003a), Goodwin-Stewart and Kent (2006), Hoitash and Hoitash (2009) and Zaman et al. (2011). Hoitash and Hoitash (2009) suggest that increased audit committee activity could signal an effort to resolve financial irregularities and thus lead to higher audit fees. Another explanation could be that diligent audit committees are more effective and require higher quality audits to safeguard the shareholder, which will also lead to higher audit fees. This study highlights the significant positive impact of audit committee commitment on audit fees. This is one of the contributions of the study as previous audit pricing study did not include this variable. The finding supports the expectation that committed audit committees demand higher audit quality to complement their monitoring function. However, this study fails to find evidence that other audit committee characteristics, such as audit committee effectiveness, independence and finance expertise have any significant impact on audit fees. These results are similar to the findings of O'Sullivan 1999, Collier and Gregory 1996, Lee and Mande 2004, Adelopo and Jallow, 2008.

The third research objective is to analyse the impact of ownership structure on audit fees. The results on the impact of ownership structure on audit quality are mixed. The study finds that average executive director shareholding or management shareholding have a significant negative impact on audit fees. This is supported by prior studies by O'Sullivan (2000) in the UK and Vafeas and Waegelein (2007) and Mitra et al. (2007) in the US, who also document an inverse significant relationship between audit fee level and insider ownership. The results indicate that auditors possibly view executive shareholding as reducing agency conflict and involvement of management in earnings management, thereby incurring lower audit fees. This study also documents a significant negative relationship between average non-executive director shareholding and audit fees. This finding is consistent with O'Sullivan's (2000) finding for his model I of a significant negative relationship between non-executive share-ownership and audit fees. He concluded that non-executives possessing significant equity interests might have business or family links with the company and behave similarly to executive directors. Another explanation could be that non-executive

shareholdings reduce the independence of non-executive directors, and therefore, a lower quality audit is required from the auditor. However, contrary to expectation, large blockholder ownership has insignificant impact on audit fees.

The fourth research objective is to establish the relationship between non-audit fees and audit fees. Consistent with other UK studies (e.g. O'Sullivan, 2000; Ezzamel et al., 1996; Firth, 1997; Firth, 2002; Hay et al., 2006; Che Ahmad et al., 2006) it is found that log total non-audit fees have a significant positive impact on audit fees at 1% confidence level in all models tested, for both 2007 and 2010. This is further supported by a result from a meta-analysis covering audit fee literature up to 2007 (Hay, 2012), which confirms that audit fees and non-audit fees have a significant positive association. This finding is inconsistent with knowledge-spillover theory and also could counter the claim that the provision of non-audit services may affect auditor independence. However, it should be highlighted that this study finds that when total non-audit fees are dominant over total audit fees this indeed has a significant negative impact on audit fees. There could be an implication that auditors might give discount to clients to gain more non-audit work from them and this could hence affect auditor independence. The availability of published data relating to details of non-audit fees in annual reporting, effective from the year ending on 31st December 2005, enabled this study to investigate the relationship between individual components of non-audit services and audit fees. The regression results show that non-audit services related to legislation, tax and other non-audit services have a significant positive impact on audit fees. However, there is not enough evidence to conclude that non-audit fees related to corporate finance services have a significant impact on audit fees. This is consistent with Palmrose (1986b) and Davis et al. (1993), who found a significant positive relationship between audit fees and accounting-related management services, non-accounting management services and tax services. Analysis of 2010 data shows a consistent result with 2007 regarding the relationship between details of non-audit services and audit fees. These findings reflect that increasing the provision of tax services and services relating to legislation increases the audit fees that auditors charge their audit clients. The reason could be that these two kinds of non-audit service expose the real financial

position and weaknesses of the client and consequently the auditor may price the relevant risk identified by charging higher audit fees to problematic clients.

The fifth research objective is to analyse the impact of economic crisis on the relationship between governance characteristics and audit fees. The study documents a significant relationship between audit committee size, audit committee diligence and commitment and audit fees in 2007. However, this study fails to find any significant relationship between most of the board characteristics and the audit committee and audit fees in 2010. This insignificant result may be due to a number of reasons. First, while improvements in internal governance characteristics (both board and audit committees) are expected to indicate stronger internal controls and reduced demand for extensive audit testing, the increased independence of the audit function from the control of management may allow the undertaking of more extensive audits that would consequently incur higher fees (O'Sullivan, 2000). Moreover, as the expectations of the users of the Financial Statements, particularly the shareholders, in terms of the monitoring responsibility of the board and audit committee have increased, the audit committee might transfer some of this responsibility to auditors by requiring them to carry out more thorough and higher quality audit work. Finally, since the recommendations of the various versions of the Code of Corporate Governance (1998-2010) have been widely adopted by UK listed companies, the variation between companies in respect of governance characteristics is likely to be small, therefore weakening the power of the empirical tests. This is especially true in the aftermath of the economic crisis (2010) as companies have become more aware that good corporate governance is essential to maintaining effective overall corporate monitoring mechanisms and company success. For ownership structure, a comparison analysis shows that in 2007 both executive and non-executive director share ownership had a significant negative impact on audit fees. However, after the economic crisis, only non-executive director share ownership still has a significant impact on audit fees. The significant result for non-executive share ownership could imply that in the aftermath of the economic crisis, auditors see non-executive share-ownership as a way to offset the potential drawbacks of Non-executive directors, especially those who are former employees of the firm or have personal relationships with the management. This is because, through having

substantial share ownership in the company, non-executive directors become more motivated to enhance the company's performance and thus audit risk is reduced.

Finally, the study also provides evidence consistent with most prior audit pricing literature regarding control variables. First, firm size (LOGTOTASSETS) consistently shows a significant positive impact on audit fees at 1% confidence level in all models tested. This has been confirmed in previous studies (e.g. Hay et al., 2012; Hay et al., 2006; Collier and Gregory, 1996). This study also documents evidence that client complexity, proxied by Log total subsidiaries, number of overseas subsidiaries and the number of US subsidiaries and regulated industry, is an important determinant of the total fees paid to external auditors. However, the control variables measuring client riskiness produce mixed results. From the results it could be concluded that only the ratio of debtors to total assets (DEBTORS) and the ratio of stocks to total assets (STOCKS) are important determinants of audit fees. Consistent with other UK studies, such as Chan et al. (1993), Ezzamel et al. (1996), O'Sullivan (2000) and Chaney et al. (2004), this study finds a significant positive relationship between audit fees and whether the auditor was based in London. Splitting the sample into small and big companies segments reveals the existence of a Big Four audit premium among small audit clients. Finally, the study finds no evidence that an audit carried out during the busy period (31st December to 31st March), report lag, company listing on the FTSE 350 and company profitability have significant impact on audit fees.

7.3 Theoretical and Policy Implications

The results of the study have some general implications for the current debate on corporate governance issues, especially in relation to the role of the audit committee in promoting good corporate governance. First, this study finds that audit committee size has significant positive impact on audit fees. Therefore, it supports the Code of Best Practice on Corporate Governance (2006) and the UK Corporate Governance Code (2010), which suggests that the audit committee should have at least three members in order to provide necessary strength and diversity of expertise and views to ensure appropriate monitoring. In addition, this study supports the recommendation of the Smith Report (2003) for audit committees to hold a minimum of 3 meetings per year as it is found that the

annual number of audit committee meetings has a positive impact on audit fees. In addition, the study contributes to the literature on the relationship between audit committee characteristics and audit pricing as it is found that audit committee commitment also has a significant positive impact on audit fees. This study also supports the notion that executive share ownership and non-executive share ownership could help reduce agency costs by reducing the scope and intensity of audit work.

Finally, the findings on the impact of non-audit fees on audit fees have implications for the current debate on whether regulators should ban all non-audit services. This study finds that total non-audit fees have a significant positive impact on audit fees, despite its theoretical expectation of a negative relationship. Therefore, the total prohibition of non-audit services is not supported. Financial directors of the FTSE 100 also believe that there is no real threat to independence and that a ban on auditors undertaking non-audit services would have a negative impact on the competitiveness of UK companies (Christodoulou, 2010). In addition, the study contributes by providing further understanding on the relationship between non-audit fees and audit fees. This study unbundles the total non-audit fees into nine types of non-audit service. However, as some of the services are not widely used, the study finally proceeded with four types of non-audit service. This study finds that tax services, other services relating to legislation and other non-audit services significantly contribute to the creation of a positive relationship between non-audit and audit fees. This is supported by the finding of Beattie et al. (1996) that most of the Non-audit services provided by auditors are not management consultancy tasks, but instead are essential accounting services that enable listed companies to comply with legal and regulatory requirements. Beattie et al. (1996) suggested that the unbundling of non-audit fees is beneficial to the Accounting Profession since previous practice invited unnecessary criticism by bundling essential compliances services with a limited amount of consultancy work for disclosure as one fee figure.

7.4 Limitations of the Study and Avenues for Future Research

This study is subject to certain limitations. First, the study relies heavily on published data, hand collected from annual reports. Therefore, the quality of the

data collected is dependent on the disclosure quality of companies listed on the London Stock Exchange. In addition, even though care has been taken to avoid errors during data collection, it is possible that small mistakes might have been made. However, the study makes a worthwhile contribution to audit pricing literature by providing empirical results using a unique data set, hand collected from the annual reports of the sample firms.

Second, the data collected generally relate to large firms fully listed on the London Stock Exchange. Future research should expand the study to AIM listed companies to explore whether the impact of governance characteristics of such firms on audit fees differs significantly from that of fully listed companies.

Third, although this study tried to fit in as many control variables as possible and also test as many governance characteristics as possible, some important variables might have been omitted and some have been intentionally ignored: mainly due to time limitations as manual data collection is a time consuming process. It is suggested that future research should include important variables ignored in this study, such as auditor tenure and audit committee tenure, in the audit-pricing model.

Fourth, the study is based purely on quantitative data. It is found that most of the governance characteristics, including audit committee characteristics, have no significant impact on audit pricing. Therefore, future research should complement the current findings by undertaking qualitative research to further explore the role of governance mechanisms, in particular the audit committee. The use of qualitative research methods might also shed light on concerns raised by Spira (1999) regarding the ceremonial role of audit committees. It seems that this issue is still relevant in the post-governance reform period. A qualitative study undertaken in 2007 (Fearnley et al., 2011) revealed the fact that neither audit committees nor audit committee chairs are fully engaged in all aspects of decision-making on financial reporting therefore supporting the claim by Beasley et al. (2009) and Cohen et al. (2010) that audit committee is regarded as just a symbolic endeavour. Therefore, the following research questions adopted from Gafran and O'Sullivan (2013) might be particularly useful in obtaining additional data to further understand the relationship identified through quantitative analysis:

How do audit committee members decide whether to continue with or replace the external auditor?

How do audit committees members decide on the extent and type of non-audit services to be requested from their incumbent auditor?

How do audit committee members decide on the balance between audit and non-audit work done by external auditors?

At what point do they believe the independence of the audit could become impaired?

How are audit and non-audit fee negotiations undertaken between the audit committee and the auditor?

What factors influence audit committee members/non-executive directors in deciding the extent and scope of the audit?

Finally, whilst this study investigates the impact of governance characteristics using data for the years 2007 and 2010, a study using longitudinal data from 2007 to 2011 might be useful in explaining the relationship between governance characteristics and audit quality when proxied by audit fees. In addition, future studies could expand the governance characteristics to include the internal audit function and qualitative research methods such as interviews and questionnaire surveys could be usefully applied in gathering data, as the data currently published are not adequate for this purpose.

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APPENDICES

APPENDIX 1: A Summary of Empirical Studies Examining the Influence of Non-Audit Fees on Audit Fees since the 1990s[2]

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Simunic (1984) *(JAR)*	Analyses a client's decision to purchase MAS and audit services when their production functions are interdependent as well as testing for the existence and pricing effects of knowledge spill-over.	Data from 263 publicly-held companies in 1977. *(USA)*	• Audit fees of clients who purchase MAS from their auditors are significantly higher than audit fees of clients who do not do so. • While efficiencies from joint production may exist, this does not imply that joint performance of MAS and auditing is necessarily desirable.
Palmrose (1986b) *(JAR)*	Investigates the effect of non-audit services on the pricing of audit services.	1980-1981 data from 298 public and closely-held companies with big 8 firms as the incumbent auditor. *(USA)*	• Provides evidence of a positive relationship between fees for audit services and fees for three categories of non-audit services (accounting-related MAS, non-accounting MAS and tax).
Abdel-Khalik (1990) *(CAR)*	Provides a method to evaluate directly the cost (benefits) of knowledge spill-over arising from purchasing MAS from the incumbent auditor	84 survey responses from different audit regions in five states (excluding financial companies but includes private firms), study undertaken in early 1987. *(USA)*	• Purchasing MAS from the incumbent auditor does not have an impact on audit fees.
Davis et al. (1993) (AR)	Investigates whether the provision of non-audit services results in knowledge spillover and audit production efficiencies that could produce economic rents for the auditor.	98 clients of one large public accounting firm. *(USA)*	• Finds a weak, positive relationship between tax services and audit effort measures and between accounting-related consulting services and audit hours weighted by billing rate ratios. • Provides no empirical evidence that provision of non-audit services will affect auditor objectivity.

[2] Even though the table focuses on the analysis of literature starting from 1990, Simunic (1984) and Palmrose (1986) are included as these are the studies most commonly quoted by much of the audit pricing literature.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Ezzamel,et al. (1996) *(ABR)*	To report on the extent and nature of the provision of non-audit services to audit clients and to ascertain the association between fees for audit and for non-audit services in the UK.	1992/93 data from 314 UK Quoted Firms *(UK)*	• Income earned by audit firms from non-audit work for quoted clients averaged nearly 90% of the levels of audit fee earnings in 1992/93 –more than a quarter of clients paid more for non-audit services than for the audit • The extent of voluntary disclosure of the breakdown of non-audit services was limited and the existing disclosure requirement allowed considerable variety in the manner in which non-audit services fees incurred or paid abroad were disclosed. • There was a significant positive association between fees for audit and non-audit services, similar to that reported in the majority of US and Australian studies • Four of the nine interaction terms introduced were significant, implying that non-audit services fees may moderate the association between other explanatory variables and audit fees.
Firth (1997b) *(JBFA)*	Examination of audit fees paid by companies listed on the Oslo Stock Exchange.	Data on 157 listed companies on the Oslo stock exchange in 1991-1992 *(Norway)*	• Arthur Andersen and KPMC Peat Marwick have the largest market shares, together accounting for more than 50% of audit fees, consultancy fees, and total fees. • 75% of clients received consultancy services from their auditors. • There is a positive relationship between audit fees and consultancy fees.
Firth (1997a) (CAR)	A model is developed that seeks to explain a company's decision to purchase non-audit services from the auditor, proposing that companies that face potentially high agency costs purchase relatively smaller amounts of non-audit services from their auditor.	1992 and 1994 data on 500 largest British industrial, listed companies as ranked in *The Times 1000*	• Results indicate that companies that have higher agency-cost proxies are associated with smaller purchases of non-audit services from their auditors. • Director shareholdings, the shareholdings of the largest owner, and the debt-to total assets ratio affect the amount of consultancy services bought from the auditor.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Lennox (1999) *(EAR)*	Investigates the effect of non-audit services on audit quality	Data from 537 listed companies in 1988-1994 (UK)	• Following the announcement of the requirement to disclose non-audit fees, approximately 1/3 of UK quoted companies disclosed before the requirement became effective. • Auditor size, directors' shareholdings and non-audit fees were not significantly correlated with early disclosure. • Indicates a positive weakly significant relationship between disclosed non-audit fees and audit qualifications- suggests that when non-audit fees are disclosed, the provision of non-audit services does not reduce audit quality.
Clatworthy et al. (2002) *(JBFA)*	Investigate the market for audit services for UK National Health Service (NHS) trusts.	459 NHS Trust for the year ended 31st March 1997 (UK)	• A negative association between audit and non-audit fees in the UK National Health Service sector consistent with knowledge spillover.
Firth (2002) *(JBFA)*	To examine the provision of non-audit services (also termed here as consultancy services) to audit clients using data from UK	1,112 observations of company listed on International Stock Exchange in 1996	• Positive association between audit and non-audit fees observed in the UK is primarily driven by company specific events (e.g. mergers and acquisitions, restructuring, new finance, change in management) that result in the demand for more consultancy and audit services.
O'Sullivan, and Diacon (2002) *(IJA)*	Compare the pricing of audits in mutual and proprietary insurance companies (including audit committees and non-audit fees)	1992 data from 117 UK insurance companies *(UK)*	• There is weak evidence of the relationship between provision of non-audit service and audit fees. No evidence between audit fees and nature of non-audit service. Company size and complexity are the most important determinants of audit pricing in insurance companies, with significant price reductions earned by insurers specializing in either general or life insurance business

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Frankel et al. (2002) *(AR)*	Examines whether auditor fees are associated with earnings management and investigates the market reaction to the disclosure of auditor fees.	2001 data from 3,074 proxy statements on the SEC"S EdGAR database with filing date between February 5, 2001 and June 15 2001. *(USA)*	• Presents evidence that non-audit fees are positively associated with small earnings surprise and the magnitude of discretionary accruals • Found that audit fees are negatively associated with these earnings management indicators. • Also found a negative association between non-audit fees and share values on the date the fees were disclosed, although the effect is small in economic terms.
Ashbaugh et al. (2003) *(AR)*	Further investigation of the association between non-audit fees and biased financial reporting.	2001 data from 3,170 U.S. registrant firms for which 2,000 proxy statements were available on EDGAR or Global Access during November and December 2001 (excluding financial institutions) *(USA)*	• Finds no relationship between positive discretionary accruals and any of the auditor fee metrics when discretionary accruals are adjusted for firm performance and sample firms are partitioned by income-increasing versus income decreasing accruals • In the earnings benchmark tests, they find no relation between fee ratio and the likelihood that firms beat analysts' forecasts. • Also finds no evidence that the market reacts to the magnitude of non-audit fees relative to total fees
Whisenant et al. (2003) *(IJA)*	Investigates whether the characteristics of clients, auditors, and the auditor-client relationship simultaneously determine audit and non-audit fees.	2001 data from 2,666 listed firms disclosing fiscal year 2000 audit and non-audit fee data in proxy statements filed at the SEC from January 1 to August 31 2001. *(USA)*	• The results of the study show that audit and non-audit fees are endogenous. • It was found that inferences are different on the relation between audit and non-audit fees after considering the simultaneity of audit and non-audit services compared with those inferences from single-equation estimations. • Estimating the system of fee equations simultaneously, they find that provision of audit and non-audit services leads to no relation with audit fees, with suggestion that single-equation estimations suffer from simultaneous-equation bias. • Findings also suggest that either there is no knowledge spillover or equal knowledge spillover exists between audit and non-audit services.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Abbott et al. (2003b) *(CAR)*	Examine the association between audit committee characteristics and the ratio of non-audit service(NAS) fees to audit fees	538 companies filing proxies with SEC between Feb 5, 2001 and June 30 2001 (excluding mutual funds and other financial registrants) *(USA)*	• Audit committee comprised solely of independent directors meeting at least four times annually has significant negative association with the NAS fee ratio.
Larcker and Richardson (2004) *(JAR)*	To examine the relationship between the fees paid to audit firms for audit and non-audit services and the behaviour of accounting accruals.	2000-2001 data from 5,815 firm-years *(USA)*	• The ratio of non-audit fees to total fees has a positive relation with the absolute value of accruals • Using latent class mixture models to identify clusters of firms with a homogenous regression structure reveals that the positive association only occurs for about 8.5% of the sample • Find consistent evidence of a *negative* relation between the level of fees (both audit and non-audit) paid to auditors and accruals (i.e. higher fees are associated with smaller accruals) • The latent class analysis also indicates that this negative relation is strongest for client firms with weak governance
Felix et al. (2005) *(CAR)*	Investigates how external auditor provision of significant non-audit services and client pressure to use the work of internal auditor influence external auditors' use of internal auditors' work.	Audit engagements for 1996 were obtained from the same data set used in Felix et al (2001) and gathered through matched surveys completed by internal and external auditors for 74 Fortune 1000 firms *(USA)*	• It was found that when significant non-audit services are not provided to a client, internal audit quality and the level of internal-external auditor coordination positively affect auditors' internal audit reliance decisions • However, when the auditor provides significant non-audit services to the client, internal audit quality and the extent of internal-external auditor coordination do not significantly affect auditors' reliance decisions • When significant non-audit services are provided, client pressure significantly increases extent of internal audit reliance. • External auditors appear to be more affected by client pressure and less concerned about internal audit quality and coordination when making internal audit reliance decisions for clients for whom significant non-audit services are also provided.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Lee and Mande (2005) *(QJBE)*	Examine the association between the fees paid to the external auditor and effective audit committees	2000 data from 792 firms from the Investor Responsibility Research Center's (IRRC) database *(US)*	• Initial results also suggest that effective audit committees seek to increase audit quality by reducing the non-audit services provided by the external auditor. • Once the non-audit fee is modelled endogenously the results show that there is no statistically significant association between the non-audit fees and audit committee effectiveness.
Jeong et al. (2005) *(IJOA)*	Investigate the relationship among audit fees, mandatory auditor assignment and the joint provision of Non-audit and auditor services.	Data from 2025 firm year observations of companies listed on Korean Stock Exchange for the period between 1999 and 2002. *(Korea)*	• Assigned auditors charge significantly higher audit fees than freely selected auditors. • Joint provision of audit fees and non-audit fees does intensify the relationship between auditor assignment and audit fees. • Suggest that mandatory auditor assignment may improve auditor independence.
Antle et al. (2006) *(RQFA)*	Addresses the endogeneity issue by modelling the confluence of audit fees, fees for non-audit services and abnormal accruals in a system of simultaneous equations.	Data from 2,294 Firm year observations from 25 industries for fiscal year 1994-2000 and 1,570 USA firms' year observations for fiscal year 1994. *(UK)*	• Finds evidence consistent with knowledge spillover (or economies of scope) from auditing to non-audit services and from non-audit services to auditing. • Do not find support for the assertion that fees for non-audit services increase abnormal accruals. • Found that non-audit fees *decrease* abnormal accruals, which is attributed to the productive effects of non-audit services.
Hay et al. (2006) *(JBFA)*	Examines evidence in New Zealand as to whether auditors providing more non-audit services are less independent.	1999-2001 data from top companies in New Zealand (177 for 1999, 224 in 2000 and 243 in 2001). *(New Zealand)*	• Found positive relationship between audit fees and non-audit fees. • No significant relationship between audit qualification or modification and non-audit fees. • There is no significant relationship between auditor change and non-audit fees.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Wu (2006) *(CAR)*	Presents a model in which both markets for audit services and non-audit services are oligopolistic.	Data from two oligopolistic markets: the audit market (CPA firms or auditors) and the consulting market (consulting firms or consultants) *(USA)*	• The empirical implication of the result is that because of competition-crossover effects between the auditing and consulting service markets, finding empirical evidence for knowledge spillover benefit is likely to be difficult. • Control variables for "audit market concentration" concerned with competition-crossover effects and "auditor expertise" concerned with knowledge spillover benefits should be included in audit fee regressions to increase the power of empirical tests. • With regard to policy implications, the analyses help explain the impact of the Sarbanes-Oxley Act on "market segmentation" and hence the profitability of accounting firms.
Stein (2006) *(CAR)*	To explain the theory/empirical evidence gap on the knowledge spill-over.	2001 data from 3,053 firm year observations of publicly traded companies *(USA)*	• The results suggest that knowledge spillover benefits may be difficult to find because of the intermediating effect of competition crossover. • Control variable for audit "market concentration" concerned with knowledge spillover benefit should be included in audit fee regressions to increase the power of empirical testing.
Che Ahmad et al. (2006) *(AAMJAF)*	To examine the effect of non-audit services on audit fees, to investigate the relationship between non-audit fees and the issuance of qualified audit opinion and to analyse the proportion of non-audit fees to total fees paid by a client to its auditor.	2002 data of 819 public listed companies. *(Malaysia)*	• Found significant positive relationship between audit fees and non-audit fees and significant relationship between non-audit fees and qualified audit opinions. • Finally, the descriptive analysis presents a worrying development regarding the high ratio of non-audit fees to total fee.
Srinidhi and Gul (2007) *(CAR)*	This study examines linkages between the audit and non-audit fees and accrual quality.	2000-2001 data from a database compiled by Standard & Poors from proxy statements *(USA)*	• Results show that accrual quality has a significant negative association with the magnitude of non-audit fees but a significant positive association with audit fees. • This latter result is consistent with the proposition that higher audit fee reflects higher audit effort and better judgments about the propriety of accruals, but is not consistent with the proposition that audit fee is associated with economic bonding.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Mitra and Hossain (2007) *(JBR)*	Examines the empirical relationship between the institutional stock ownership and the relative level of non-audit service fees.	Data from 335 firms listed on NYSE that are non-regulated, non-financial and non-service in nature and which have their year-end on 31/12/2000. *(USA)*	• There is a significant negative relationship between institutional ownership and non-audit ratio.
Joe and Vandervelde (2007) *(CAR)*	Investigate whether knowledge gained from working on a non-audit task can be transferred to enhance the performance of the audit task and whether any knowledge transfer can be achieved if the auditor only reviews the non-audit work papers prepared by non-audit staff in the same audit firm or a different audit firm.	2005 data from 84 in-charge auditors from a "Big 4" public accounting firm in US who were attending a firm-wide in-charge auditor training program. Method: Experiment *(USA)*	• Results shows that auditor-provided non-audit services can be beneficial in that knowledge transfer aids audit risk assessments when the same auditor performs both non-audit and audit services-higher risk assessments were made by auditors who performed both services than were made by auditors who performed only audit services and had no access to the non-audit service work papers.
Bigus and Zimmermann (2008) *(IJA)*	Analyses auditors' market shares and concentration in Germany on the basis of audit fees.	2005 data from 175 listed companies *(Germany)*	• Non-audit fees amount to 41.9% of the total fees and are nearly as important as audit fees. • The Big 4 firms obtained 87% of all the audit fees and 90% of the total fees. • PricewaterhouseCoopers is the market leader, based on the total fees and the audit fees. • KPMG earns the most in the sub-market for tax consultancy. • Audit firms specialize in certain industries or stock market segments. • Market concentration increases over time
Lim and Tan (2008) *(JAR)*	Investigates whether the relationship between the provision of non-audit services and the impairment of audit quality is conditional on auditor specialization.	2000-2001 data from 1,692 financially distressed firms *(USA)*	• It was found that audit quality, measured by increased propensity to issue going-concern opinion, increased propensity to miss analysts' forecast, as well as that higher earnings-response coefficients increase with the level of non-audit services acquired from industry specialist auditors compared to non-specialist auditors.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Lee et al. (2009) *(IJA)*	To examine whether audit report lags decrease as auditor tenure increases and to study whether the provision of non-audit services by external auditor reduces report lags	2000-2005 data from 18,473 firms-years representing 15 industries *(USA)*	• Both audit tenure and non-audit services are negatively significantly associated with ARLs. • Indicates that the longer the audit tenure, the more efficient auditors are in auditing their clients and the more non-audit services they supply, meaning more learning, thus reducing audit delays.
Quick and Warming-Rasmussen (2009) *(IJA)*	Investigate the influence of NAS on the perceived auditor independence.	2006 data from 98 survey responses from "Borsen-Team" an academic investment club at Darmstadt University of Technology *(Germany)*	• Shareholders generally perceive a negative effect on auditor's independence if NAS are provided, especially if NAS is provided by separate department of audit firm
Griffin et al. (2009) *(A&F)*	Examines the association between overseas and New Zealand governance regulatory reforms and New Zealand companies' audit and non-audit fees	Data from 653 company-year observations for the period 2002-2007. *(New Zealand)*	• Found that audit fees increased in New Zealand over 2002–2006 and such increases associate reliably with the transition to and adoption of NZ IFRS and not with earlier overseas governance reforms. • Also document a decrease in non-audit fees over the same period, but find no IFRS effect for non-audit fees.
Lu and Sapra (2009) *(AR)*	Develop a theoretical framework to investigate the determinants and consequences of auditor Conservatism in a capital market and implications of Section 201 of SOX for auditor conservatism and investment efficiency.	A theoretical paper: Model the interactions between corporate decisions and investors' decisions and assess how auditing mediates these interactions.	• By adjusting the mix of audit and non-audit fees, companies with high business risk induce auditor conservatism, while companies with low business risk induce auditor aggressiveness. • The nature of investment inefficiency (over or under) depends on its auditor attestation (conservative or aggressive) • Mandatory restriction of non-audit services imposed by section 201 increases audit conservatism, decreases a conservative auditor's audit quality and increases an aggressive auditor's audit quality, increases overinvestment and decreases under-investments and increases the audit fees.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Ghosh et al. (2009) *(JAPP)*	Examine the relationship between audit and non-audit fees and capital market perceptions of auditor independence	2001 - 2006 data of 21,797 firm-year Observations (client of Big 5 auditor). *(USA)*	• Found that earnings response coefficients (ERCs) are negatively associated with client importance, but there is no evidence of an association between ERCs and non-audit fee ratio- investors perceive client importance, and not non-audit fee ratio, as compromising auditors' independence. • Further, when they decomposed client importance into two components: audit fees and non-audit fees, from a given client as percentages of the total revenues of the audit firm, they found that only the audit fee component is significantly negatively related to ERCs- investors are concerned about perceived auditor independence when client importance increases because of audit fees, but not because of non-audit fees.
Lai and Krishnan (2009) *(A&F*)	Study the association of non-audit services with firm value.	Data from 562 firm-year observations for sample 1 firms (mixture of companies buying/not buying the service) and 408 for sample 2 firms that buy FIS-related services from the incumbent auditors in year 2000 or 2001. *(USA)*	• Found that the market value of equity is greater for firms that purchase FIS-related services from their incumbent auditors relative to firms that do not. • The levels of FIS fees are found positively related to firm value after controlling for total other fees, or total other non-audit fees. • Implication: Despite the negative perception associated with non-audit services, investors regard FIS-related services as value-adding activities.
Duh et al. (2009) (*RQFA)*	Examines whether non-audit service provision impairs auditor independence and whether the degree of auditor independence in Taiwan changed in the wake of the 2004 Procomp scandal	Data from 37 companies listed on the TSE and the GreTai securities market for 2003 and 2004. *(Taiwan)*	• The results indicate that the non-audit fees ratio was significantly and negatively associated with audit adjustment in 2003 (prior to the Procomp event) but not in 2004 (after the event). • The coefficient of manipulation for 2004 was significantly smaller than that for 2003. Using non-audit fees (rather than non-audit fees ratio) as an independent variable yields similar results. • These findings have implications for the amendment of the CPA Law currently under deliberation in that proscribing non-audit service may not be the only route to strengthening auditor independence.

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Abidin et al. (2010) *(BAR)*	Study the audit market structure, fees and choices in a period of structural change (1998-2003) in UK	Data from UK companies listed on Main and AIM market of London stock exchange (9,006 observations) for the period 1998-2003. *(UK)*	• There has been significant upward pressure on audit fees since 2001 for smaller auditees and audit fee income for Big 4/5 did not change significantly, while the number of auditees fell significantly. • Andersen's demise reduced the level of inequality among top tier firms, with PWC retaining its position as the dominant firm. Former Andersen clients experienced an initial audit fee rise broadly in line with inflation. • There are significantly lower Non-audit fees among the companies.
Craswell et al. (2010) *(Conference Paper)*	To estimate a supply and demand system for the audit of Australian listed companies by combining publicly available data and proprietary data on audit hours (using simultaneous equation).	Data from 136 Australian listed companies. *(Australia)*	• The results from the study suggest that the higher audit fees obtained by suppliers of non-audit services result from two influences: a shift to the right in the demand curve and an upward shift in the supply-price function. • The benefits of any knowledge spillovers are offset by higher prices representing economic rents.
Zaman et al. (2011) *(JBFA)*	Examines the influence of audit committee effectiveness as a proxy for governance quality on audit fees and non-audit fees using a new composite measure comprising audit committee independence, expertise, diligence and size.	Data from 135 companies (540 company year observations) of UK FTSE-350 in 2001-2004 *(UK)*	• ACE has positive association with Non-audit service fee (NASF) • NASF is negatively associated with audit committee financial expertise and audit committee independence and positively associated with audit committee size. • Board meeting, CEO-duality, board independence, company size and Big 4 has positive association with NASF.
Knechel et al. (2012) *(JBFA)*	Examines whether auditor-provided non-audit services generate knowledge spillover, using a sample of audits from New Zealand	2004-2005 data of 230 Firm year observations of New Zealand listed companies.	• A negative association between non-audit fees and audit lag, thus suggesting the presence of knowledge spillover. However, the knowledge spillover effect is limited to the city office providing both the audit and non-audit services

Author(s) *(Publication)*	Objective(s) of study	Details of study *(Country)*	Main findings
Chan et al (2012) *(AF)*	Examines whether independent audit committee members' board tenure affects audit fees	1524 firm-year observations for the years 2005 and 2006. *(USA)*	• Find that audit fees are negatively associated with the proportion of long board tenure directors on the independent audit committee, consistent with the notion that audit committee members' long board tenure results in lower audit effort.

Appendix 2: Descriptive statistics on audit committee characteristics for FTSE 350 and Non FTSE 350

Descriptive

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
ACSIZE	0	605	3.45	.913	.037	3.38	3.53	1	9
	1	162	3.73	1.052	.083	3.57	3.89	0	7
	Total	767	3.51	.950	.034	3.44	3.58	0	9
%ACNEXEC	0	605	99.85	2.17	0.09	99.68	100.02	66.67	100.00
	1	160	99.79	2.64	0.21	99.38	100.20	66.67	100.00
	Total	765	99.84	2.27	0.08	99.68	100.00	66.67	100.00
ACMEET	0	604	3.85	1.375	.056	3.74	3.96	1	15
	1	160	4.59	1.864	.147	4.30	4.88	2	17
	Total	764	4.00	1.520	.055	3.90	4.11	1	17
%ACCOMM	0	603	96.14	5.47	.22	95.70	96.57	66.67	100.00
	1	160	95.22	5.29	.42	94.39	96.05	75.00	100.00
	Total	763	95.94	5.44	.20	95.56	96.33	66.67	100.00
ACSUEXPERT	0	605	.38	.728	.030	.32	.44	0	5
	1	160	.51	.752	.059	.40	.63	0	4
	Total	765	.41	.735	.027	.35	.46	0	5
%ACSUEXPERT	0	605	9.52	19.46	0.79	7.96	11.07	0.00	100.00
	1	160	10.70	15.73	1.24	8.25	13.16	0.00	75.00
	Total	765	9.77	18.73	0.68	8.44	11.10	0.00	100.00
ACCEXPERT	0	605	.95	.659	.027	.90	1.00	0	3
	1	160	.93	.714	.056	.81	1.04	0	3
	Total	765	.95	.671	.024	.90	.99	0	3
%ACCEXPERT	0	605	24.57	19.24	0.78	23.04	26.11	0.00	100.00
	1	160	21.09	17.74	1.40	18.32	23.86	0.00	75.00
	Total	765	23.85	18.97	0.69	22.50	25.19	0.00	100.00
ACFINEXPERT	0	605	1.32	.681	.028	1.27	1.38	0	5
	1	160	1.44	.791	.063	1.31	1.56	0	4
	Total	765	1.35	.707	.026	1.30	1.40	0	5
%ACFINEXPERT	0	605	33.98	20.06	0.82	32.38	35.59	0.00	100.00
	1	160	31.79	17.29	1.37	29.09	34.49	0.00	100.00
	Total	765	33.53	19.53	0.71	32.14	34.91	0.00	100.00
ACE	0	605	.87	.353	.014	.84	.90	0	3
	1	160	.90	.301	.024	.85	.95	0	1
	Total	765	.87	.343	.012	.85	.90	0	3

ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
ACSIZE	Between Groups	9.699	1	9.699	10.880	.001
	Within Groups	681.957	765	.891		
	Total	691.656	766			
ACSIZEDUM	Between Groups	.115	1	.115	1.694	.194
	Within Groups	51.797	765	.068		
	Total	51.911	766			
ACSIZEDUMMY	Between Groups	.003	1	.003	.126	.723
	Within Groups	16.620	765	.022		
	Total	16.623	766			
%ACNEXEC	Between Groups	.408	1	.408	.079	.779
	Within Groups	3937.500	763	5.161		
	Total	3937.909	764			
ACNEXECDUM	Between Groups	.007	1	.007	1.091	.297
	Within Groups	4.960	764	.006		
	Total	4.967	765			
ACMEET	Between Groups	70.408	1	70.408	31.698	.000
	Within Groups	1692.581	762	2.221		
	Total	1762.988	763			
ACMEETDUM	Between Groups	.025	1	.025	.338	.561
	Within Groups	56.105	762	.074		
	Total	56.130	763			
ACALLMEET	Between Groups	.005	1	.005	.006	.939
	Within Groups	673.182	761	.885		
	Total	673.187	762			
%ACCOMM	Between Groups	105.535	1	105.535	3.577	.059
	Within Groups	22452.234	761	29.504		
	Total	22557.769	762			
ACSUEXPERT	Between Groups	2.272	1	2.272	4.224	.040
	Within Groups	410.296	763	.538		
	Total	412.567	764			
%ACSUEXPERT	Between Groups	177.336	1	177.336	.505	.478
	Within Groups	267966.982	763	351.202		
	Total	268144.317	764			
ACCEXPERT	Between Groups	.082	1	.082	.181	.670
	Within Groups	343.612	763	.450		
	Total	343.694	764			
%ACCEXPERT	Between Groups	1536.485	1	1536.485	4.286	.039
	Within Groups	273538.358	763	358.504		
	Total	275074.844	764			
ACFINEXPERT	Between Groups	1.631	1	1.631	3.276	.071
	Within Groups	379.877	763	.498		
	Total	381.508	764			
%ACFINEXPERT	Between Groups	608.750	1	608.750	1.598	.207
	Within Groups	290655.770	763	380.938		
	Total	291264.521	764			
EXPERTDUM	Between Groups	.003	1	.003	.097	.756
	Within Groups	26.044	763	.034		
	Total	26.047	764			
ACE	Between Groups	.131	1	.131	1.117	.291
	Within Groups	89.821	763	.118		
	Total	89.953	764			

* 0= non FTSE 350 **1= FTSE 350

APPENDIX 3: Skewness and Kurtosis for variables used.

	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis
AUDITFEE	5.583	.088	37.736	.176
BOARDSIZE	1.018	.088	1.418	.176
%NEXEC	-.133	.088	.080	.176
%INDNEXEC	-.941	.088	.649	.176
%INDDIRS	-.032	.088	.139	.176
DUALITY	6.131	.088	35.686	.176
BOARDMEET	1.851	.088	8.255	.176
ACE	-1.778	.088	4.422	.176
ACSIZE	1.057	.088	3.177	.176
%ACNEXEC	-18.875	.088	407.591	.176
ACMEET	2.466	.088	13.599	.177
%ACCOMM	-1.341	.088	1.736	.177
%ACFINEXPERT	1.255	.088	2.031	.176
%ACSUEXPERT	2.606	.088	8.123	.176
%ACCEXPERT	.774	.088	1.024	.176
NOBLOCKS	.301	.089	-.245	.178
ABLOCKOWN	.158	.089	-.391	.178
ANEXSHARES	5.479	.089	34.774	.177
AEXESHARES	3.836	.089	16.531	.177
LOSS050607	1.540	.088	.373	.176
TOTASSETS	9.980	.088	106.536	.176
LOGTOTASSETS	1.073	.088	1.669	.176
DEBTORS	2.160	.090	6.875	.179
STOCK	3.232	.088	13.339	.176
ROA	1.622	.088	16.409	.176
GEARING	.772	.090	.447	.180
LIQUIDITY	20.063	.089	433.490	.177
BUSY	-1.189	.088	-.587	.176
SUBS	4.276	.088	34.687	.177
UKSUBS	2.362	.088	7.436	.177
FTSE350	-.759	.088	-1.428	.176
REG	1.420	.088	.016	.176
FINANCIALS	1.604	.088	.576	.176
BIG4	-4.100	.088	14.850	.176
LONDON	-.455	.088	-1.798	.176
DELAY	19.036	.089	459.373	.177
LEGIST	7.788	.088	76.948	.176
%LEGIST	1.810	.090	2.855	.179
TAX	5.906	.088	47.946	.176
%TAX	.371	.090	-1.175	.179
CORPFIN	7.027	.088	63.258	.176
%CORPFIN	1.941	.090	2.513	.179
OTHERSERVICE	4.955	.088	28.913	.176
%OTHERSERVICE	.897	.090	-.461	.179
TOTNONAUDIT	4.791	.088	29.864	.176
LOGTOTNONAUDIT	-2.865	.088	10.365	.176
AUDITVSNON	.905	.088	-1.185	.176

APPENDIX 4: OLS regressions explaining the determinants of audit fees for FTSE all shares for the year 2007 and 2010 (Robustness test- Ownership variation)

	Stand. Coeff	t-value	sig value	VIF	Stand. Coeff	t-value	sig value	VIF
(Constant)		-.146	.884			-.146	.884	
%INDDIRS	-.019	-.858	.391	1.305	-.019	-.858	.391	1.305
DUALITY	-.016	-.773	.440	1.060	-.016	-.773	.440	1.060
BOARDMEET	-.016	-.761	.447	1.148	-.016	-.761	.447	1.148
ACSIZE	.055	2.411	.016	1.358	.055	2.411	.016	1.358
%ACNEXEC	-.001	-.056	.955	1.067	-.001	-.056	.955	1.067
ACMEET	.076	3.324	.001	1.362	.076	3.324	.001	1.362
%ACCOMM	.032	1.555	.120	1.069	.032	1.555	.120	1.069
%ACFINEXPERT	.019	.880	.379	1.245	.019	.880	.379	1.245
NOBLOCKS	.043	1.950	.052	1.227	.043	1.950	.052	1.227
ANEXWITHSHARES	.013	.614	.539	1.111				
AEXEWITHSHARES	-.004	-.179	.858	1.094				
NEXWITHSHARES					.013	.614	.539	1.111
EXEWITHSHARES					-.004	-.179	.858	1.094
3YEARSLOSS	-.007	-.299	.765	1.334	-.007	-.299	.765	1.334
DEBTORS	.140	6.474	.000	1.200	.140	6.474	.000	1.200
STOCK	-.061	-2.903	.004	1.145	-.061	-2.903	.004	1.145
ROA	-.001	-.037	.971	1.229	-.001	-.037	.971	1.229
GEARING	-.010	-.456	.648	1.272	-.010	-.456	.648	1.272
BUSY	.027	1.272	.204	1.145	.027	1.272	.204	1.145
REG	-.173	-7.888	.000	1.241	-.173	-7.888	.000	1.241
BIG4	.021	.944	.345	1.247	.021	.944	.345	1.247
LONDON	.119	5.423	.000	1.243	.119	5.423	.000	1.243
LOGDELAY	.029	1.384	.167	1.163	.029	1.384	.167	1.163
LOGTOTASSETS	.643	20.948	.000	2.434	.643	20.948	.000	2.434
UKSUBS	-.030	-1.447	.148	1.144	-.030	-1.447	.148	1.144
USSUBS	.180	8.476	.000	1.166	.180	8.476	.000	1.166
LOGTOTNONAUDIT	.167	7.352	.000	1.340	.167	7.352	.000	1.340
PERIOD	.019	.900	.369	1.182	.019	.900	.369	1.182
R square	0.741				0.741			
Adj.R square	0.731				0.731			
F Value	73.559				73.559			
Durbin Watson	2.041				2.041			

Appendix 5: Abbreviations Used in the Literature Summary

Abbreviation	*Journal*
AAMJAF	Asian Academy of Management Journal of Accounting And Finance
A&F	Accounting & Finance
AFR	Accounting and Finance Research
AA	Advances in Accounting
ABR	Accounting and Business Research
ABRv	Accounting and Business Review
ABACUS	A Journal of Business Finance and Accounting Studies
AIA	Advances in International Accounting
AJPT	Auditing: A Journal of Practice & Theory
AR	The Accounting Review
ARA	Asian Review of Accounting
ARJ	Accounting Research Journal
BAR	British Accounting Review
CAR	Contemporary Accounting Research
CGIR	Corporate Governance: An International Review
EAR	European Accounting Review
FAM	Financial Accountability & Management
FCS	Finance Contrôle Stratégie
FE	Financial Executive
GAJ	Government Accountants Journal
HBR	Harvard Business Review
ICFAI	ICFAI Journal of Audit Practice
IJA	International Journal of Accounting
IJAu	International Journal of Auditing
IJCM	International Journal of Commerce and Management
IJRM	International Journal of Research in Marketing
JAAF	Journal of Accounting, Auditing and Finance
JAE	Journal of Accounting & Economics
JAPP	Journal of Accounting and Public Policy
JAR	Journal of Accounting Research
JAAR	Journal of Applied Accounting Research
JBFA	Journal of Business Finance & Accounting
JBR	Journal of Business Research
JCAE	Journal of Contemporary Accounting & Economics
JEMS	Journal of Economics & Management Strategy
JIAAT	Journal of International Accounting Auditing and Taxation
JIFMA	Journal of International Financial Management & Accounting
JMG	Journal of Management and Governance

JSM	Journal of Strategic Marketing
MAJ	Managerial Auditing Journal
MSE	Management Science and Engineering
PAR	Pacific Accounting Review
QJBE	Quarterly Journal of Business and Economics
RAEE	Research in Accounting in Emerging Economies
RAR	Research in Accounting Regulation
RIGNA	Research in Governmental and Nonprofit Accounting
RAF	Review of Accounting and Finance
RQFA	Review of Quantitative Finance and Accounting
SMJ	Strategic Management Journal
TaiAR	Taiwan Accounting Review