
Corporate Attributes and Audit Pricing

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Abstract

The objective of the study is to undertake an empirical analysis of corporate attributes and Auditor pricing/fee in Nigeria. Specifically, the study examines the impact on Auditor pricing of the following; firm size, profitability, Leverage, firm Complexity and Year-end Date. The cross-sectional research design was used for the study with an extensive reliance on secondary data. A sample of 35 manufacturing companies was selected using the simple random sampling technique. Multiple Regression analysis was employed as the method of data analysis. The findings indicate that while profitability, and complexity appeared to be significant determinants of Auditor pricing, Client size, Leverage, and Fiscal year end date were not significant at 5%. Diagnostic analysis conducted indicated that the regression assumptions test such as the Pearson correlation coefficients for collinearity, the Breusch-pagan-Godfrey test for heteroscedasticity, the Lagrange Multiplier (LM) test for higher order autocorrelation and the Ramsey RESET test miss-specification showed that the model satisfies the necessary criterion. The study recommends that that there is the need for regulation of audit fees in the Nigerian environment as the market framework for determining the audit fees may not readily suffice as an advantage for the fostering of auditor dependence.

Keywords: Corporate Attribute, Auditors Pricing, Profitability, Leverage, Complexity, Client Size

Introduction

The pricing of external audit has further become fundamental area of audit research in recent times especially following after the classical cases of audit failures experiences in Enron and other corporations. The disturbing dimension resulting from ex-post analysis and discourses of these cases of corporate failure is that often times the client had been given a “clean bill of health” and a qualified auditor’s opinion by the auditor. This therefore suggest that there had been incentives for the maintenance of an on-going relationship between auditor and client and the auditor independence and the audit quality had to become the opportunity cost for the survival of the interest of clients and the auditor. The search for explanations for the auditor performance, the level of auditor independence and the audit quality has seen audit pricing evolving as a critical factor and this is well documented in the literature (Simunic 1980, Davidson and Gist 2015), Audit pricing is an important issue and has a significant effect on auditor’s performance, their independence and more particularly on audit failures. Thus audit pricing research may be seen as a subset of the general research area concerned with issues of audit fee determination, auditor independence and audit quality.

Audit pricing is concerned with the determination of remuneration for auditor services that relates directly and primarily to the audit function. Succinctly put, it deals with the determination of audit remuneration. Since the early work on the pricing of audit services by

Simunic (1980), substantial progress has been made with regard to the understanding the basic economics of audit pricing. According to Soltani and Rezik (2017) there are several peculiarities of the audit market. Firstly, audit has been described as a differentiated product traded in a non-arbitrage able market. Secondly, there is the assumption that the audit market is segmented (Simunic, 1980). The first is a competitive market segment consisting of ‘small’ auditees serviced by a large number of auditors, and the second, a potentially less competitive segment for ‘large’ auditees that is dominated by a few large audit firms. Second, an auditor faces cost uncertainty, so the return (net income) from an engagement depends upon the fees paid by the client. Thirdly, in the market for audit services the fear of losing the clients and revenues generated from the various assurance activities may compromise the auditor’s independence and result in ‘*low-balling*’. The phenomenon of ‘*low-balling*’ is a particular aspect of price competition and according to DeAngelo (1981) it concerns a contemplated change of auditors and that may easily cause a loss of audit quality. ‘*Low-balling*’ is when audit firms quote audit fees that are below their start-up costs with new clients believing that future fees will exceed future marginal audit costs.

Following the market framework, early studies such as Simunic (1980) explicitly saw the audit pricing as the determination of audit fee and initiated the use of the demand and supply functions to identify the determinants of audit pricing and hence the audit fee. This market theory covers both the demand side and the supply side determinants i.e. determinants representing features from clients that demand audits and from auditors that supply audit services. Following the audit fee literature, several determinants of audit fee includes have been identified. On the supply side, these factors include competitive conditions in audit market size of the auditing firm, the risk of the auditee, audit contracts types, the extent of audit planning and the provision of other accounting services to the auditee amongst others. On the demand side, the factors include; firm size, profitability, complexity, corporate governance and industry of operation amongst others.

The focus of this study therefore is to examine the factors that influence audit pricing and determination of audit fee in Nigerian audit environment and ascertain the suitability of the market framework in explaining audit fees in Nigeria and using quoted firms. In addition and in contrast to prior studies in this area of research, this study also incorporate the implications of economic environment and general performance of the economy on the determination of auditor pricing and remuneration.

Statement of the Research Problem

Following the market framework, several studies have identified factors that influence the pricing of audit services. Studies (e.g., Joshi and Bastaki, 2000; Gonthier- Besacier and Schatt, 2007; Ahmed and Goyal, 2005) results support the typical assumption that auditee size has a significantly positive influence on audit fee determination. However, in Carson et al (2004) find no linear correlation. Musah (2017) reveals that client’s size of business, international recognition, affiliation of audit firms (Big four firms) and profitability are significant determinants of audit fee in Ghana. However, Ohidoa, and Omokhudu (2018) found that, auditor type, client’s firm size, client’s complexity, client’s firm risk and audit committee independence have significant effect on audit fees, while firm’s profitability has no effect on audit fees. On the contrary, Carson et al (2004) using Australian audit fee data found no correlation between audit fees and client size. Ilaboya, Izevbekhai and Ohiokha, (2017) found a positive and statistically significant relationship between the interaction of Big 4 audit firms and firm size and the dependent variable of abnormal audit fees. Hassan (2015) auditee size seems to have been the key determinant of external audit fees. Furthermore, financial risk is found to be negatively and significantly associated with the level of external audit fees.

Baldacchino, Attard and Cassar (2016) study investigates the factors influencing the external audit fees in Malta. Results indicate that the amount of external fees is significantly influenced by audit client size, complexity, risk, ownership control and corporate status. In the European context, André et al (2010) report that size of the audited company, level of current assets, leverage, number of subsidiaries, busy season for auditing firms and nonaudit fees have a positive impact on overall audit fees.

The evidence from these studies revealed the presence of mixed findings in the literature which suggest that the issues involved in the auditor pricing and the determination of auditor remuneration are far from been settled empirically. This indicates that there is the need for more researches to examine the auditor pricing across different context and hence the need and timeliness of this study. In addition the determinants of audit pricing in developing economies have not been adequately articulated beyond the anecdotal evidences that abounds. Hence this study fills the gap by providing empirical evidence and contributing to the conclave of research evidence from developing economies.

In the light of the above, the following research questions are relevant

- i. What is the relationship between firm size and the pricing of auditor services?
- ii. What is the relationship between firm profitability and the pricing of auditor services?
- iii. What is the relationship between Leverage and the pricing of auditor services?
- iv. What is the relationship between firm Complexity and the pricing of auditor services?
- v. What is the relationship between firm Auditee Fiscal Year-end Date and the pricing of auditor services?

Research Objectives

The following research objectives have been specified to guide the direction of the study;

- i. To examine the relationship between firm size and the pricing of auditor services.
- ii. To investigate the relationship between firm profitability and the pricing of auditor services.
- iii. To examine the relationship between Leverage and the pricing of auditor services.
- iv. To investigate the relationship between firm Complexity and the pricing of auditor services.
- v. To investigate the relationship between firm Auditee Fiscal Year-end Date and the pricing of auditor services.

Research Hypotheses

- H1:** There is a significant relationship between client size and the pricing of auditor services.
- H2:** There is a significant relationship between profitability and the pricing of auditor services.
- H3:** There is a significant relationship between Leverage and the pricing of auditor services.
- H4:** There is a significant relationship between firm Complexity and the pricing of auditor services.
- H5:** There is a significant relationship between firm Auditee Fiscal Year-end Date and the pricing of auditor services

Literature Review

The nature of audit pricing has attracted attention in recent times because of its effect on auditor independence and by implication the audit quality. Audit pricing has become an important area of research with significant implications both for auditors who are the

providers of audit services and corporate entities that demand for audit services. Audit pricing has been analyzed within a market framework, where is determined primarily by the demand conditions of the users of audit services and the supply conditions of the providers of audit services. This chapter covers the conceptual framework addressing concepts such as auditor pricing and determinants of auditor pricing, Review of empirical literature and theoretical framework.

Conceptual Framework

Audit pricing refers to the process of audit fee determination or auditor remuneration. The audit fee has in extant literature been divided into two categories; audit fees and non-audit fees. While audit fee refers directly to payments made to the auditor that relates directly to the audit function, non-audit fees is concerned with payments for other non-audit services rendered by the auditor. Since the early work on the pricing of audit services by Simunic (1980), substantial progress has been made in understanding the factors which are involved in the determination of audit pricing. Studies document that auditor pricing is a function of auditor effort and perceived audit risk (e.g., Simunic 1980).

According to Dinh (2016) the demand for audit services comes from company owners, outside investors, company managers, governments and general public. However there exists a paradox that some demanders do not have the same goal because they do not have the same interest. For example, company managers want to report higher earnings since it means they will get higher bonus and uphold their position; meanwhile outside investors need to know the real loss or profit as well as information about company future events to make investment decisions.

Anecdotal information provided by auditing practitioners confirms the fundamental role played by the number of direct labor hours expended on the audit. Generally, the audit fee should cover audit costs and provide a reasonable profit. Therefore, the audit fee can be seen as a combination of two items; audit cost and profit or auditors reward. Other important factors typically identified by practitioners include the number of site visits required to conduct the audit, the quality of the personnel required to assess the relevant items, the quality of the client, the types of items requiring auditing, the level and quality of internal auditing conducted by the client, and the number of years the auditing firm has been associated with the client. An evaluation of the relative importance of each of these factors has attracted considerable attention in the auditing literature.

However, according to Jensen and Payn (2003) the market for audit services is often analyzed using a framework that captures monopolistic behavior to that of a perfectly competitive environment (Simunic, 1980). However, neither of these economic models captures the competitive nature of the audit market. The authors provide an alternative paradigm to explain the behavior in the audit market which shows that the equilibrium audit fee offered to a client is directly related to the production cost of the next closest audit firm in a competitive “space”. Jensen and Payn (2003) notes that the findings suggest that price competition increased the presence of lower cost participants in the market, leading to a general decrease in audit fees.

One of the first theories regarding the determinants of the audit fees was developed by Simunic (1980). He proves that the level of the audit fees depends first on the auditor’s effort. The connection between the “price” of the audit and the effort for its accomplishing is a natural one, because any audit mission is carried out according to some compulsory

standards and rules established by professional auditing organizations. Simunic (1980) also proved the direct connection between the level of the audit fees and the subsequent litigation risk. Referring to this statement, Pratt and Stice (2014) underline that the auditor's evaluation in terms of possible losses in future litigations may result in an increase of the audit effort in order to reduce this litigation risk, and, consequently, to a raise of the audit fees. In more contemporary literature (Joshi and Bastaki, 2000; Gonthier- Besacier and Schatt, 2007; Ahmed and Goyal, 2015, Ho and Hutchinson, 2010; Goddard and Masters, 2016; Steward and Munro, 2017) several factors have been identified as important considerations in the audit pricing process. Among the factors, Hayes, Dassen, Schilder, and Wallage (2005) mentions the following: the auditee's size and the geographical dispersion, the size of the audit company, financial performance of the client, corporate governance structure, the quality of the auditee's internal control system, Auditee industry of operation amongst others. Moreover, it has been argued that the impact of these factors on the level of audit fees is quite contradictory (Cobbin, 2016).

Urhoghide and Izedonmi (2015) describes audit pricing to be payments made to the auditor which directly relates to the audit function, they explained that audit fee contains audit cost and at the same time creating a reasonable profit, hence expresses audit fee to be a combination of two items; costs of the audit and profit accruing to the auditor. The amount of fees paid to external auditors is of great importance to a number of stakeholders that is why disclosure practices requires that such information be disclosed in the financial statements of companies (Kikhia, 2015; Hentati & Jilani, 2013). Simunic (1980) study presented the audit market and the audit pricing model as a framework of demand and supply economics. The demand factors responsible for pricing are the attributes of the audit client such as client risk, profitability, complexity and size amongst others. Demand factors can provide a premise for explaining the direction of audit fees though do not provide all the information on all likely factors that go into audit pricing.

Chan et al. (2001) show that the equilibrium audit fee offered to a prospective client is directly related to the production costs of the next closest audit firm in a competitive "space." This suggests that audit firms are not price setters and have to respond to competition provided by other firms. In retrospect, early audit pricing studies were motivated by concerns that the top tier audit firms were earning excess economic rents due to the existence of an oligopolistic market structure; here the size of the audit firm seemed to have a positive correlation with the audit fee. Later studies, conducted in a more competitive auditing environment, were motivated by concerns regarding low-balling, and the potential resultant weakening of auditor independence and reduction in audit quality (Choi et al., 2010).

Corporate Attributes and Auditor Pricing

From our examination of contemporary accounting literature, we find the following factors to be quite recurrent as determinant of auditor pricing. We shall review a number of these determinants as follows;

Client Size

The most dominant determinant of audit fees found across virtually all published studies is size, which is expected to have a positive relationship with fees (Simunic 1980). According to Steward and Munro (2017) compared to auditing small-sized clients, auditing large-sized client's makes a need of spending more time and effort. External auditors have to spend more time for client meetings, understanding client complicated internal control systems, designing more audit procedures and conducting more test of detail. Larger

companies may have more effective internal control systems and thus it can be expected that auditors reduce audit procedures. To this end, as the fees paid to auditors depend on the amount of time to complete the job given, it is expected that larger companies have to pay higher audit fees. Since the pioneering publication of Simunic (1980) on this subject as well as in other international studies, company size appears to be the central explanatory feature when studying audit fees. This result is rather intuitive, since auditors' fees are paid according to the amount of time spent completing a given job. By and large, the bigger companies are involved in a greater number of transactions that necessarily require longer hours for an auditor to inspect. Consequently, the positive correlation between the size of the audited company and the fees paid to the auditors can be explained by the higher number of hours billed.

The amount of variation explained by size is generally in excess of 70 percent, however, this percentage may be significantly lower in smaller firms (Bell et al. 2004). The results for size measures are overwhelmingly positive and significant. There are studies that include assets as a control variable for size, with all but one having a significant positive coefficient. A considerable body of empirical auditing literature has focused on researching the role of auditee size in changing audit fees (e.g., Joshi and Bastaki, 2000; Gonthier-Besacier and Schatt, 2007; Ahmed and Goyal, 2015). Their study results support the typical assumption that auditee size has a significantly positive influence on audit fee determination. This finding is robust regardless of the explanatory variable used to measure company size (based on either the balance sheets or on the profit and loss accounts). Size is typically measured as total assets, with some studies using revenues. The size measure is typically transformed by taking the natural logarithm of the raw data in order to improve the linear relationship with audit fees. Consequently, we expect size to be positively related to audit pricing.

Client Complexity

It is likely that the level of audit work will increase with the level of auditee complexity. In previous private sector studies, proxies for complexity have included the number of subsidiaries, the number of industries in which the company participates, the number of different company locations and variables relating to asset composition. Basically, audit fees are dependent on how long time auditors have to spend for an audit engagement. It means companies with complexity are charged higher audit fees. Complexity of an audited firm is examined in two aspects: complexity of operation and complexity of balance sheet composition. Under the impact of globalization, companies can extend their operation to foreign countries by establishing subsidiaries. Auditors for such companies have to spend more time for evaluating consolidated financial statements. On the other hand, the complexity of operations can lead to complex transactions which require auditors to invest more time to test. The complexity of balance composition can be reflected through the complexity of assets. Generally, companies with higher ratio of liquid assets (inventory, receivables) to total assets are more complex than others.

Like auditee size, auditee complexity is of interest in researching determinants of audit fees. (e.g Joshi and Bastaki, 2000; Gonthier-Besacier and Schatt, 2017; Ahmed and Goyal, 2015; Thinggaard and Kiertzner, 2008). Most results are consistent with the view that auditee complexity has a positive relation with audit fees. Joshi and Bastaki (2000), Thinggaard and Kiertzner (2008), reveals that audit fees are positively associated with the number of subsidiaries in foreign countries proxied for auditee complexity. Attempting to assess the relation between audit fees and the complexity of balance sheet composition, many

authors (Francis and Stokes, 2006; Gonthier- Besacier and Schatt, 2017) find considerable evidences to suggest a positive association of audit fees and auditee complexity. Ahmed and Goyal (2015) however do not find such relation. Researchers typically expect that the more complex a client, the harder it is to audit and the more time-consuming the audit is likely to be (Hackenbrack and Knechel 2014). However, the general concept of complexity has been measured in many different ways by researchers.

Fiscal Year-end Date

Peters (2011) notes that majority of companies has the same fiscal year-end date of December 31. Time around December 31 is called the busy season for auditors. In this period, auditors, especially auditors of big auditing firms usually have to work overtime. Previous researches point out auditor behaviors can be affected by a higher demand for audit services during the busy season (Lopez and Sweeney and Summers 2002; Lopez and Peters, 2011). Lopez and Peters (2011) find that December year-end companies have lower likelihood to change auditors. This behavior is to avoid high switching cost due to the busy season. Though there are not many authors researching the relationship between audit fees and year- end date (Gonthier-Besacier and Schatt, 2017; Pong, 2018), we expect the relationship with audit pricing to be positive.

Leverage:

Leverage also measures the risk of a client failing, which potentially exposes the auditor to loss (Simunic 1980). Consequently, researchers generally expect to find an association between the leverage of a company and its audit fees (e.g., Gist 1994). Prior studies have used a number of different proxies for leverage but the two most common have been the leverage ratio (mainly the ratio of debt financing to total assets) and the quick ratio which measures the adequacy of short term financing. Other studies have used equity-to-debt, the probability of failure, the current ratio, or a Z –score. The expected association between fees and leverage ratio is positive, while the relationship with the quick ratio is expected to be negative. In their meta-analysis, Hay, Knechel and Wong (2004) notes that about half of the prior studies confirm these expectations and the meta-results are highly significant. However, the file drawer result is better for leverage ratio (460 studies required to overturn the result vs. 74, respectively). The combined meta-results support the expected relationship between leverage and audit fees. However, there are a large number of insignificant results that have been reported in prior studies. Classifying these studies by country and time period suggests that leverage may have been important in the US in the 1980s, and in the UK to a lesser extent, but generally not important in other countries For example, six of the nine studies conducted in the US in the 1980's reported a significant relationship between fees and leverage while only one of 13 five conducted in Hong Kong in the 1990s yielded a significant result. Studies conducted in Norway, Singapore and Finland were insignificant with respect to leverage. These results suggest that the impact of leverage in audit fees varies across national environments.

Client Profitability

Client profitability is often considered another measure of risk because it reflects the extent to which the auditor may be exposed to loss in the event that a client is not financially viable and eventually fails (Simunic 1980). In general, the worse the performance of the organization, the more risk to the auditor and the higher the audit fee is expected to be. The two variables that are typically used to measure performance are a profitability ratio (usually net income divided by total assets, and a dummy variable for the existence of a loss). It is expected that the relationship between audit fee and return on assets will be negative and the

relationship with loss will be positive. The results for the profitability ratio measure are mixed. A meta-analysis conducted by Hay, Knechel and Wong (2004) revealed that three studies reported a significant positive result for return on assets, while seven reported a negative association. The meta-analysis is also negative with a file drawer result of 141. The alternative measure of profitability, a dummy variable for loss, was reported to be significant and positive in 27 percent of the papers reviewed with a positive meta-result and file drawer test of 150. In order to examine these results in more detail, the authors classified the various studies that incorporated a dummy variable for financial losses by country and time period. The studies that yielded results that contradicted expectations and were not significant (or negative) came mostly from Canada and Australia and were almost all using data prior to 1990. In fact, studies from the 1970s and 1980s often yielded insignificant results for the loss measure. In contrast, data from the 1990s and more recent periods generally confirm expectations about the association between fees and losses. We do not speculate as to the reason for such a development but the pattern of results suggests that the existence of a loss for a client has become a significant driver of audit fees in the past decade.

While these mixed results may be due to low statistical power of the test statistics, it could also indicate that auditors are not as finely calibrated to differences in the profitability metrics as the analysis suggests. The relationship between return on assets and fees may be non-linear since a reduction of ROA when a company is already losing money may not have the same impact as a reduction when the company is just barely making a profit. Similarly, while the loss dummy is a crucial metric and requires less calibration by auditors, it still may not reflect the cut-off at which auditors perceive increased risk.

Empirical Review

A considerable body of empirical auditing literature has focused on researching the role of auditee size in changing audit fees (e.g., Joshi and Bastaki, 2000; Rubin, 1988; Gonthier-Besacier and Schatt, 2007; Ahmed and Goyal, 2005). Theirs study results support the typical assumption that auditee size has a significantly positive influence on audit fee determination. However, in contrast to the aforementioned finding, Carson et al (2004) using Australian audit fee data for the period from 1995 to 1999 find no linear correlation between audit fees and auditee size.

Musah (2017) study was to examine the determinant of audit fee with empirical evidence from the Ghana stock exchange. Specifically, the study examined audit fee determinant which included the client size, profitability measured by ROA, LOSS, client risk measured by debt ratio, YEAR (season) and MNC. Using the Simunic (1980) model, this study reveals that client's size of business, international recognition, affiliation of audit firms (Big four firms) and profitability are significant determinants of audit fee in Ghana. Results in study indicate that ignorance of risk factor by the auditors may pose serious threat to fame and reputation of audit firm along with indication of feeble legal regime in Ghana. The results of the study have significant implications for auditors and firms in negotiating audit fees in Ghana.

Ohidoa, and Omokhudu (2018) study examined the firms' characteristics and audit fees in Nigeria. The justification arose from the fact that, auditing profession has come under increased scrutiny over the years about the growing amount of fees paid by audit client and the contributing impact of such fees on auditor independence and the need to investigate the firms' factors that affect audit fees in Nigeria. The study employed a employed time series and cross-session data (panel data) of firms listed at the Nigeria Stock Exchange and data used was gathered from secondary source (annual financial statement) of firms quoted at the

Nigeria Stock Exchange from 2013-2017. A sample size of eighty-nine (89) firms was used through the aid of Yaro, (1964) formula for sample size determination. And the statistical tool used in the study was Panel Least Square Regression with the aid of Eview 7.0 and SPSS 20. The study found that, auditor type, client's firm size, client's complexity, client's firm risk and audit committee independence have significant effect on audit fees, while firm's profitability has no effect on audit fees.

In this same vein, Semiu and Olayinka, (2010) used firms' size as a variable in their study and also assert that there is strong relationship between enterprise size and audit fees. On the contrary, Carson et al (2004) using Australian audit fee data for the period of 1995 to 1999 in his study came out with an assertion that there is no correlation between audit fees and client size.

Ilaboya, Izevbekhai and Ohiokha, (2017) study aim is to investigate the determinants of abnormal audit fees in Nigerian quoted companies, with specific emphasis on how the firm size, Big4, profitability, joint audit, and leverage impact on abnormal audit fee. The study involved about eighty four (84) manufacturing companies quoted on the Nigerian Stock Exchange as at 31st December 2014. A sample of 56 companies representing 67% was finally selected for the study. Panel regression estimation technique was used in the analysis of the variables. The choice of the panel regression technique is premised on its quality of unbiasedness, increased data point, and control for individual heterogeneity. To test the accuracy of the model, they employed the classical regression assumption tests of normality, heteroskedasticity, serial correlation and multi co-linearity. The study found a positive and statistically significant relationship between the interaction of Big 4 audit firms and firm size and the dependent variable of abnormal audit fees.

Hassan (2015) study sets out to examine the factors influencing the level of external audit fees paid by firms to their auditors in Jordan. Specific attention is focused on the investigation of the potential influence of auditee size, complexity of client, profitability, client risk, auditor size and auditor tenure on audit fees, by using the Sample which contains 117 non-financial Jordanian companies which listed on Amman Stock Exchange, meet the selection standards and have the applicable and appropriate financial data from 2010 until 2012. However, the auditee size seems to have been the key determinant of external audit fees. Furthermore, financial risk is found to be negatively and significantly associated with the level of external audit fees. On other side, empirical results found that the audit tenure has no significant relationship with audit fees.

Rusmantoa and Waworuntub (2015) study set out to examine the factors influencing audit fee in companies which have applied Good Corporate Governance. This study uses a sample of data from companies listed on the Indonesia Stock Exchange LQ 45 during the year 2011 and 2012. Data is analyzed by using model developed by Wu (2012) using multiple linear regression. The research found that assets (company size) significantly affect/determine audit fee paid by clients to audit firms. Whereas other factors such as profit, business complexity and number of subsidiary are not significant in determining audit fee.

Baldacchino, Attard and Cassar (2016) study investigates the factors influencing the external audit fees in Malta. This includes assessing whether client size, complexity and risk, also known as the "traditional" determinants, are applicable in the case of Malta, as well as testing the issue of premium pricing amongst the Big 4 audit firms. Of particular interest is the determination of specific factors relevant to such a market. A GLM regression model is used to examine the effect of the independent factors on the amount of audit fees for a sample of audit engagements performed in the Maltese audit market. The model is further

complemented by a series of semi-structured interviews with audit partners from various audit firms of different sizes. Results indicate that the amount of external fees is significantly influenced by audit client size, complexity, risk, ownership control and corporate status. Additionally a fee premium has been found to accrue to the Big 4 audit firms.

We examine a sample of 300 publicly listed companies in three European countries (France, Germany and the UK) during the period 2003-2008 to investigate the relations between audit fees and several auditor and company attributes. These include quantitative and qualitative variables. The presence of Big Four and non-Big Four firms in charge of the audit of a company's financial statements is also considered. The overall evidence indicates that the presence of the Big Four, clients' specific characteristics in terms of industry, size and complexity of operations have inevitably a significant impact on audit fees. However, the contrasting results we observe in our cross-country analysis lead to the conclusion that the environmental factors specific to each country, such as the size of professional accounting body and audit market as well as the regulations in place in the area of auditing, may play an important role in this type of research.

Taking into consideration the expectation of the increasing effect on audit fees due of the Sarbanes-Oxley Act (SOX), Ghosh and Pawlewicz (2009) examine the expected increase in audit fees due to this Act. The results of this study indicate a large increase in audit fees following the enactment of SOX. Controlling for audit and client characteristics, the paper reports an increase of approximately 74 percent in the post-SOX period and a significant decrease of audit fees over the same period. However, total fees paid to auditors rose because the increase in audit fees more than offset the decline in audit fees. This increase is much more significant for Big Four audit firms (42 percent) compared to their smaller audit firms.

More specifically with regard to the relationship between financial reporting risk and audit fees paid to Big Four auditors, Charles, Glover and Sharp (2010) investigate whether the association between these two changed during the historical events of 2000-2003. The paper shows that not only there is a positive, statistically and economically significant relationship the authors summarized the papers on the basis of 186 commonly used independent variables in audit fees models. These variables were classified into 18 categories and then grouped into three major categories of client attributes (size, complexity, inherent risk, profitability, leverage, form of ownership, internal control, governance, and industry), auditor attributes (auditor quality, auditor tenure and auditor location), and engagement attributes (report lag, busy season, audit problems, nonaudit services and reporting).

Between financial reporting risk and audit fees paid to Big Four auditors, but that this relationship strengthened significantly around the period 2002 and 2003, when the SOX Act came into effect. The results of this study are consistent with risk management and audit pricing changes at the firms in response to significant events affecting the auditing profession during 2002-2003. This evidence shows that the auditors anticipate the effect of additional rules and regulations proposed or enacted and the increased business and litigation risk they faced in the wake of high profile corporate and accounting scandals when pricing their services and the associated risks.

In the European context, only few cross-country studies have been conducted in the past years regarding the determinant factors of audit fees. The study of André et al (2010) discussed audit fees and their determinants in France and UK. Based on the fiscal year 2005 annual reports, the authors have tested the effects of three categories of independent variables [audit attributes (Big Four firms), client attributes (size of audited company, the nature of the audited assets, level of debt, profitability and complexity) and engagement attributes (date for

entity's year end and nonaudit fees). The results of this study report that the presence of a Big Four firm, size of the audited company, level of current assets, leverage, number of subsidiaries, busy season for auditing firms and nonaudit fees have a positive impact on overall audit fees.

Several research studies have specifically examined the determinants of audit fees in a single European country. In the UK, Clatworthy and Peel (2007) simultaneously examine the determinants of external audit fees of UK companies drawn from the quoted sector (Main Market, the Alternative Investment Market and Ofex), and the unquoted sector (public and private limited companies). After controlling for firm size, audit risk and complexity, the authors find that quoted and unquoted public limited companies have significantly higher audit fees than their private limited counterparts. However, despite contrary indications in prior US research, the authors find no evidence that insolvent firms that failed were charged higher audit fees in the year preceding failure. A positive relationship is also found between audit and consultancy fees - a result that persists using an instrumental variables approach to control for endogeneity.

Cameran (2005) has investigated the case of the Italian audit market by examining the effect of several independent variables on audit fees. The variables include audited company, complexity of the operations being audited, the company's financial risk, and the type of audit engagement, size of audit firms, period of audit tenure, time specific factors (each year from 1995 to 1999) and mandatory audit. The overall findings of the study show that the size, the complexity of auditee, and the audit risk have an impact on the audit fees in the Italian market.

The determinants of audit fees in the French market were subject to another study conducted by Gonthier and Schatt (2017). By analyzing a sample of 127 French (nonfinancial) companies for the year 2002, this study considers some of the independent variables as indicated above in the French context, where the system of joint audit is applied according to which the publicly listed companies have the obligation to appoint at least two external auditors. The main finding of this study is that the size of the audited company as well as their level of risk constitutes two significant factors in determining audit fees in France. Moreover, when two Big Four firms are in charge of a company's audit, a common practice in France, the fees charged are significantly lower in comparison with those paid in other cases (for example the presence of only one Big Four). As the authors mentioned, this study was conducted in 2002 before the implementation of new laws and regulations regarding the audit market and corporate governance in France.

Chaney et al., (2004) notes that higher audit fees might be expected when an auditor is recognized to be of superior quality. A common measure of audit quality is the auditor being one of the 4 audit firms. These meta-analysis results strongly support the observation that big firms are associated with higher audit fees. However, the studies include many results that are not significant. McMeeking et al., (2006) notes that some studies, especially in the UK, include a measure for "city effect" – it is expected that companies audited in the most expensive city (e.g. London) will cost more. The result including recent studies is now a very consistent positive relationship between city effect and audit fee, and it seems worthwhile to suggest this as a further control variable to be used in studies of other countries such as the US and Australia.

Gist (2014) notes that Leverage also measures the risk of a client failing, which potentially exposes the auditor to loss. Consequently, researchers generally expect to find an association between the leverage of a company and its audit fees. Prior studies have used a

number of different proxies for leverage but the two most common have been the leverage ratio (mainly the ratio of debt financing to total assets,) and the quick ratio which measures the adequacy of short term financing. The expected association between fees and leverage ratio is positive, while the relationship with the quick ratio is expected to be negative.

Kamran and Goyal (2015) concluded that complexity has a positive, although not significant effect on audit fees. Business risk is measured by Firth (1997) as the ratio 'accounts receivable and inventory / Total assets'. Because short term assets such as inventories typically can be manipulated easier, a high ratio represents higher business risk. Given the level of audit risk, higher business risk requires more testing and consequently an audit that is more expensive. Whisenent et al (2003) found that return on assets and liquidity have a negative and significant relation with audit fees, whereas solvency has a positive and significant relation. They also found a positive and significant relation with losses. Felix et al (2001) observe a positive and significant relation between solvency and audit fees.

In Belgium, Willekens and Gaeremynck (2005) found that total assets, sales and added value are positively and highly significantly related to audit fees. Audit fees are also related to being listed and are influenced by the industry. Financial performance variables related to profitability are significant and generally have a negative relation with audit fees. They use the ratio 'inventory to total assets' as a proxy for inherent risk and find a positive but non-significant relation with audit fees.

Cohen and Hanno (2007) concluded that stronger corporate governance enable auditors to reduce test content and investigation their own. They studied 650 Hong Kong companies during the three years 1996-1994 concluded that existence of an independent the board of directors significantly is related with low audit commission and this shows company the board of directors as a mechanism of within the organization governance, the effect is significant the determination of audit fees.

Bedard and Johnstone (2010) have studied part of its research about the relationship between risk navigation systems with planning, pricing, independent auditors, observed despite the inappropriate behavior in financial reporting, that was intended as corporate Governance Risk, audit working hours and increased the fee rate in other words leading to increased risk increased audit fees.

Empirical studies on audit fees conducted in US and Australia before 2001 (SOX) shows that the audit fee for the first audit mission is significantly lower than the one of a recurrent audit mission. Two important studies from US realized by Francis and Simon (1988) for the period from 1979-1984, and Ettredge and Greenberg (1997), for the period from 1985-1995, shows that the audit fee for the first mission are 24% lower that the audit fee for the following missions. The practice of setting lower initial audit fees have been the subject of numerous studies because the major impact that could have on the independence of auditors.

According to Arnett and Danos (2009) Prior empirical evidence on the relationship between industry specialization and audit fees is mixed. Two countervailing theories can be used to explain the mixed results. One is related to audit quality, and the other is associated with scale economies. This setting of both regulated and non-regulated industries is chosen to examine whether industry specialization affects audit pricing. Prior studies argue that increases in industry regulation imposed on clients enhance the need for industry specialization for audit firms and this lead s to economies of scale because of auditor's fixed investment in industry expertise.

Further, Hogan and Jeter (2009) found that audit market leaders continue to increase market shares in non.-regulated industries, which suggests returns to industry specialists in non-regulated industries. Therefore, the effect of industry specialization on audit fees in regulated versus non-regulated industries appears to be an interesting research question. Prior research on the effect of industry specialization on audit fees finds mixed results, not only in the private and public sectors, but also in the Big 6 and Non-Big 6 market segments.

Davis and Simon (2002) examined the impact of Securities and Exchange Commission (SEC) disciplinary actions on the fees which affected accounting firms received for their audit services. In this case, the impact of the impairment of reputation on the level of the audit fees is investigated. Their findings were that the loss of reputation resulting from the SEC disciplinary actions leads to a reduction in the audit fees as was expected.

Craswell, et al. (2015) hypothesized that the „Big 8“ premium consists of two elements. Namely, a general brand name premium and an industry specific premium. Their findings for the Australian market confirmed this hypothesis. They state that specialization may lead to auditor production economies, however the evidence here is that positive returns to investment in specialization dominate potential production economies and lead to higher average audit fees”.

Ho and Hutchinson (2010) find that in Hong Kong auditors expect that the presence of audit committee lowers audit risk, leading to a lower audit fees charged. Nevertheless, Goddard and Masters (2000) find out that presence of audit committee in the UK’s companies has no relation with the amount of audit fees. Steward and Munro (2007) state that Australian external auditors rely on an effective internal control but they however do not reduce their audit testing. Moreover, time and effort saved due to the presence of effective internal control can be balanced with time spending for more meetings with client managers and partners and so there is no big change in audit fees associated with the existence of audit committee.

According to Lopez and Peters, (2011) previous researches point out auditor behaviors can be affected by a higher demand for audit services during the busy season. They find that December year-end companies have lower likelihood to change auditors. This behavior is to avoid high switching cost due to the busy season. Though there are not many authors researching the relationship between audit fees and year-end date.

Previous researches that test activity sector get considerable evidence to suggest that auditee industry is related to fees paid to external auditors. Anderson and Zeghal (2004) find that for Canadian companies, audit rates for large transportation, communication, or utilities companies are significantly lower than that of firms in other sectors. Nevertheless, Simunic (1980) recognizes audit process for financial sector is much less complicated than the manufacturing sector, explaining for less audit fees paid by financial institutions. Basing on growth speed, Gonthier-Besacier and Schatt (2017) subdivide French listed firms into firms in information technology (IT) sector and others to test. The result indicates that audit fees paid by companies in IT sector are higher than that paid by the others.

Motivated by previous studies, Niemi (2004) conducts a research about that relation in Finland and get a suggestion that there exists a differentiation in audit quality among audit firms and auditor brand name can have a great effect on auditor remuneration paid. This finding is consistent with the results of Firth (1993), and Caneghem (2009).Dinh (2012) found from his study that beside auditee size, other fees is also positively associated with audit fees. Most of authors examining other fees argue about a negative association between audit fees and other fees. Their argument is based on the convincing theories of “low-balling”

and “knowledge spill-over”. However, most of authors find empirical evidences for a positive effect of other fees on audit fees (Thinggaard and Kiertzner, 2008).

Fukukava (2011) proposed to investigate whether and to what extent the audit determinants examined in the researches so far influence the audit fees on the Japanese market and examine whether the fees charged by the Japanese audit companies and their cost strategies are significantly different. The study revealed that some determinants, such as: the client’s size and complexity, the audit risk, the stock market quotation of the company, the market share of the audit company in that field, and the client’s power to negotiate, influence the cost of the audit. Other variables, such as the client’s location, the closing date of the financial year and the features of the audit company, influence either only the audit fees, or only the audit cost, or both, but in opposite directions. The author remarks that most of the studies focused on the audit fees, while very little pointed the audit costs from the auditor’s perspective.

Theoretical Framework

The theoretical framework for the study is the agency theory. We shall identify how the theory provides a framework for audit pricing.

Agency Theory

Agency theory deals with the contractual relationship between the agent (manager) and the principal (shareholders) under which shareholders delegate responsibilities to the manager to run their business. This theory argues that when both parties are expected to maximise their utility, there is good reason to believe that the agent may engage in opportunistic behaviour at the expense of the principal’s interest. Jensen and Meckling (1976) modelled this condition as an agency relationship where the inability of the principal to directly observe the agent’s action could lead to moral hazard, thus increasing agency cost. In addition, agency theory points out the role of the board of directors to monitor both the majority shareholders and management; and to protect minority shareholders’ interests (Fama & Jensen, 1983). It was suggested that the board of directors could help reduce agency costs because it holds ultimate control over management even though some of the decision functions are entrusted to top management. A subset of the board is the audit committee which has gained attention as fundamental to reducing moral hazards.

How does the determination of audit pricing fall within the context of the agency theory? This question is answered when we consider clearly the contributions of Jensen and Meckling (1976). According to Jensen & Meckling (1976), a component of the agency costs is represented by the monitoring costs supported by shareholders for the monitoring of the managers actions. The audit fees are an important component of these costs, as long as auditors have to make sure that managers act according to the shareholders’ interests, while also auditors have the required task to inspect the accounts of the company. It may hence be supposed that auditors will spend more time inspecting the managers’ activity if the agency problems are big. Consequently, Jensen (1986) suggests that, in the case of the companies whose capital is mainly owned by managers, the agency costs are low, because it is more probable that the managers’ interests coincide with the shareholders’, when managers are also majority shareholders. Therefore, the monitoring costs, including the audit fees, will be higher in the case of the companies whose managers own an insignificant part of the capital.

Research Methodology

This section deals with the methods and steps used in the data collection and in carrying out the research study. That is to say that research methodology indicates the

specification of the procedure employed by a researcher in putting together the raw facts and data for processing and the estimation techniques to be utilized. This section covers population and sample, data collection method, sources of data, research instrument, data analysis method, model specification and limitation of the study

Research Design

The design adopted for the study is cross-sectional research design. The design is well suited in examining the several sample units across time.

Population and Sampling

The population of the study covers all companies quoted on the Nigerian stock exchange as at the study period. However, resulting from the practical difficulties of accessing the population, a subset regarded as a sample will be utilized. The basis for sampling is justified by the law of statistical regularity which holds that on the average a sample selected from a given population will exhibit the properties of its source (Green, 2003). The simple random sampling technique was employed in selecting the 35 companies for 2010-2017 financial years. The technique is well suited for determining the sample as it provides an equal probability of selection and as such minimizes selection bias.

Sources of Data

Secondary data will be used for the study. The secondary data was retrieved from financial statements of the sampled companies.

Data Analysis Method

The study will make use of ordinary least squares regression analysis as the data analysis method. Gujarati (2003) suggests four critical assumptions that must be met before utilizing the OLS regression. We shall consider them below;

Regression Assumptions test

i. Normality

In testing for normality of the series, the Jarque-Bera statistics will be examined. The Jarque-Bera statistics is a test statistic for testing whether the series is normally distributed. The test statistic measures the difference of the Skewness and kurtosis of the series with those from the normal distribution.

ii. Multicollinearity

One of the most important problems facing the use of multiple regression analysis is the probability of collinearity between independent variables, so that they cannot be fully independent (multi-collinearity) (Berenson et al., 2009). This collinearity occurs when there is a strong correlation between one or more independent variables with each other, although usually there is no new information added to the regression model. One of method used to test collinearity between independent variables is Variance Inflation Factor (VIF) for each independent variable. Basically, VIFs above 10 are seen as a cause of concern (Landau and Everitt, 2003).

iii. Heteroscedasticity

The homoscedasticity assumption means that variance of the error terms is constant for each observation (Berenson et al., 2009). There are two methods for testing heteroscedasticity; Cameron and Trivedi's decomposition of IM test and Breusch-Pagan test. In this study, the Breusch-pagan-Godfrey test will be performed on the residuals as a precaution. Where the

presence of heteroscedasticity is found in the residuals, one appropriate method to treat heteroskedasticity is to adapt Robust Standard Errors that addresses the issue of errors that are not independent and identically distributed. Generally, following Dimitropoulos and Asteriou (2010), we shall utilize the Robust Standard Errors using pooled analysis. In addition, In case of heteroskedasticity we are confident that the EGLS (Estimated General Least Squares) will likely be efficient (Verbeek, 2008).

iv. Autocorrelation

The Lagrange Multiplier (LM) test for higher order autocorrelation will be utilized in this study and this is in recognition of the fact that OLS models assume serial independence in the residuals (Maddala, 1977; Greene, 1990). The LM test is a general test for high order autocorrelation and is relatively more powerful than the DW test. The LM test is useful in that it allows for (i) lagged dependent variables, (ii) higher order autoregressive processes as well as single or higher order moving average processes. Where autocorrelation is detected, we shall adopt the Cochrane Orcutt method which implies including an autoregressive (AR) term as part of the exogenous variables and re-estimating the model (Eviews, 7.0).

v. Model specification Test

Considering Ramsey (1969) and Ramsey and Schmidt (1976) argument that various Specification errors such as omitted variables, incorrect functional form, correlation between independent variables and the error term, give rise to non-zero error term vector (Johnson, and Dinardo, 1997: 121), the performance of the Ramsey RESET test was inevitable. The test was performed to determine whether there were specification errors.

Model Specification

The model for this study in line with prior studies (Iosivan, 2008; Carson, Fargher Simon, 2005) examines the determination of audit fee from the demand factors which deals largely with the audit –client features. However, as an extension of the prior models, we examine the effect of interactions as additional control variables in our model. The models are specified below;

$$AUDPRICE = a + \beta_1 SIZE + \beta_2 PROFIT + \beta_3 LEV + \beta_5 COMPL + \beta_3 FISY + u \dots \dots \quad (1)$$

Where: *AUDPRICE* = Audit price

PROFIT = Profitability

SIZE = Company Size

AUDFTYP = Audit firm type

LEV = Leverage

COMPL = Complexity

FISY = Fiscal Year End

U_t = Stochastic term

Table 3.1: Measurement of Variables

Variable	Measurement	Source	Expected sign
Audit price	Audit fee	Simunic (1980), Soltani and Rekik (2011)	
Complexity	Number of branches	Joshi and Bastaki (2000), Thinggaard and Kiertzner (2008),	+
Firm size	Log of total assets	Gonthier- Besacier and Schatt, (2007)	+
Profitability	Return on equity	Kajola (2010)	-
Leverage	Total debts/total assets	Joshi and Bastaki (2000),	+
Auditee Fiscal Year-end Date	Dummy value of "1" if Fiscal Year-end Date is December otherwise "0"	Soltani and Rekik (2011)	+

Presentation and Analyses of Result

Table 1 Descriptive statistics

	AF	COMP	LEV	ROE	SIZE	YEND
Mean	6.09	158	5.2969	3.1133	139418	0.771
Median	6.66	135	1.06	2.2199	14.295	1
Maximum	8.22	1862	685.82	290.47	283937	2
Minimum	1.79	0	-8.93	-658.1	-8.93	0
Std. Dev.	1.37	153.52	47.01	58.626	40037	0.4348
Jarque-Bera	47.95	113702.8	421634.7	73045.96	4954.416	63.746
Prob	0.000	0.000	0.000	0.000	0.000	0.000

Source: Researcher's compilation (2018)

From the descriptive statistics of the variables as shown in table 1 above, it is observed that the average audit fee is 6.09m with a minimum and maximum value of 6.66m and 8.22m respectively. The standard deviation of the distribution stood at 1.37 which indicates that the audit fee for the sample clusters around the average value and this suggest that there is no considerable difference between audit fees for the sample. A possible reason could be because most companies in our sample are audited by the big 4 audit firms. The Jacque-Bera-statistic stood at 47.95 and the p-value of 0.00 and indicates that the data is normally distributed at 5% level of significance ($p < 0.05$) and as such selection bias is unlikely in the sample. It is observed that the mean for Complexity is 158 with a maximum and minimum value of 1862 and 0 respectively. The standard deviation of the distribution is 153.52 which is considerable large and indicates that the nature of complexity differs considerably for companies in the distribution. The Jacque-Bera-statistic is 113702 and the p-value of 0.00 and indicates that the data is normally distributed at 5% level of significance ($p < 0.05$) and as such selection bias is unlikely in the sample. The mean value for leverage (LEV) is 5.2969 with maximum and minimum values of 685.82 and -8.93 respectively and standard deviation of 47.010. The Jacque-Bera-statistic of 421634.7 and the p-value of 0.00

indicate that the series does not deviate from normality ($p < 0.05$).

It is observed that the mean for return on equity (ROE) is 3.1133 with a maximum and minimum value of 290.47 and -658.1 respectively. The standard deviation of the distribution is 58.626 with a Jacque-Bera-statistic of 73045.96 and p-value of 0.00 which indicates that the data is normally distributed at 5% level of significance ($p < 0.05$) and as such selection bias is unlikely in the sample. The mean for size is 139418 with a maximum and minimum value of 283937 and -8.93 respectively. The standard deviation is 40037 which is considerably large and suggest that the companies in the sample are of very different sizes. The Jacque-Bera statistic of 4954.416 and p-value of 0.00 indicates that the data satisfies the normality criteria ($p < 0.05$) and the presence of outliers is unlikely in the data. Finally, the mean value for Year-end (YEND) is 0.7710 which suggest that about 77% of the companies in the sample have their year ends at December while just about 23% of their financial year ends at a different date. The standard deviation of 0.4348 indicates that the December financial year end practice is common to most of the firms. The Jacque-Bera-statistic of 63.746 and the p-value of 0.00 indicate that the series does not deviate from normality ($p < 0.05$).

Table 2: Pearson Correlation Result

	AF	COMP	LEV	ROE	SIZE	YEND
AF	1					
COMPLEXITY	0.07413	1				
LEV	-0.065	0.0256	1			
ROE	-0.1552	0.0148	0.0699	1		
SIZE	0.25372	-0.132	-0.028	-0.059	1	
YEND	-0.1149	0.2004	0.0459	0.0181	-0.3	1

Source: Researcher's compilation (2018)

Table 2 above presents the Pearson correlation coefficient result for the variables. As observed, AUDF is negatively correlated with Leverage (LEV) ($r = -0.065$), and with ROE ($r = -0.155$) while the table also shows that AF is positively correlated with SIZE ($r = 0.253$) and again negatively with YEND ($r = -0.1149$). AUDF appears to be negatively correlated with COMPLEXITY ($r = -0.126$). In addition, we observed that AUDF is positively correlated with SIZE ($r = 0.2197$). The correlation coefficients also show that AUDF is negatively correlated with ROE ($r = -0.075$) and with YEND ($r = -0.274$). COMPLEXITY is negatively correlated with SIZE ($r = -0.132$) and positively correlated with LEV ($r = 0.0256$) and with ROE ($r = 0.0148$). The correlation coefficients also reveal that LEV is positively correlated with ROE ($r = 0.0699$), with YEND ($r = -0.0459$) and then negatively with SIZE ($r = -0.028$). ROE is positively correlated with YEND ($r = -0.0181$) and then negatively with SIZE ($r = -0.059$). Finally, we find that YEND is negatively correlated with SIZE ($r = -0.321$).

Table 3: Variance Inflation Factors

	Coefficient	Centered
Variable	Variance	VIF
C	1.779549	NA
COMPLEXITY	1.81E-07	1.055112
LEV	1.85E-06	1.015685
ROE	1.21E-06	1.028438
SIZE	3.39E-14	1.345976
YEND	0.025387	1.189676

Source: Researcher's compilation (2018)

Table 3 above shows the regression assumptions test .As observed, the variance inflation factor (VIF) shows how much of the variance of a coefficient estimate of a regressor has been inflated due to collinearity with the other regressors. Basically, VIFs above 10 are seen as a cause of concern (Landau and Everitt, 2003). As shown in the table, none of the variables appear to have VIF's values exceeding 10 and none will be dropped from the regression model.

Table 4: Regression Result

	Aprori sign	Coefficient Standard error () p-value { }
C	+	3.44872* (1.3339) {0.0102}
Complexity	+	0.0008* (0.0004) {0.0543}
LEV	+	-0.0004 (0.00014) {0.7656}
ROE	+	-0.00221* (-2.01069) {0.0452}
FSIZE	+	0.2417 (0.0002) {0.1921}
YEND	+	-0.2770 (0.1593) {0.083}
Model properties		
R-squared		0.709901
Adjusted R-squared		0.590613
S.E. of regression		1.155817

F-statistic		16.06664
Prob(F-statistic)		0.000
Durbin-Watson stat		2.150082
Post -Estimation diagnostics		
Breusch-Godfrey Serial Correlation LM Test:		Prob (f) = 0.2585
Heteroskedasticity Test: Breusch-Pagan-Godfrey		Prob (f) =0.8294
Ramsey Reset Test		Prob (f) =0.1099

Source: Researchers compilation (2018).

Table 4 above shows the ordinary least squares regression result conducted using Eviews 7.0. The white heteroskedasticity-consistent standard error is used to control for possible heteroskedasticity in the model. As observed, the R^2 and coefficient of determination is 0.71 which indicates that the model explains about 71% of the systematic variations in the dependent 2.150082Zvariable. The Adjusted R^2 which controls for the effect of inclusion of successive explanatory variables on the degrees of freedom stood at 0.59. The F-stat value is used to test for the goodness of fit of the model and it serves as a test of the joint statistical significance of all the variables examined together and also tests the existence of a significant linear relationship between the dependent and independent variables. A significant F-test indicates that the model is able to explain what actually the practice in reality is and that the model can be relied upon to make possible forecasting and prediction about how the independent variables will affect the dependent variable. The decision rule is to accept the F-stat as significant if the probability value is less than 0.05 otherwise it is rejected. From the table above, the F-state value of 16.066 and the associated p-value of 0.00 which is less than 0.05 and hence we accept the joint statistical significance of the model and that significant linear relationship exist between the dependent and independent variables. Also, the result indicates that we can be confident that the model will be able to explain the actual behaviour of audit pricing.

The evaluation of the slope coefficients of the explanatory variables reveals Complexity (COMPLEXITY) appears to be positive and significantly related to Audit pricing as indicated by the slope coefficient (0.0008) and p-value (0.05). The result indicates that audit pricing increases with the complexity of firm especially with regards to the number of subsidiaries which was used as the measure for complexity in this study. Leverage (LEV) exerts a negative but not significant impact on audit pricing as indicated by the slope coefficient (-0.0004) and p-value (0.766<0.05) and this suggests that a firm's leverage level could result in a decline in the Audit price. Return on Equity (ROE) appears to impact the Audit price negatively which is also significant at 5% as indicated by the slope coefficient (-0.0022) and p-value (p=0.045<0.05). The result indicates that audit pricing increases with reductions in return on equity. Firm Size (SIZE) appears to be impact Audit price positively though not significant at 5% and this indicates that larger firms would have to pay higher audit price. Finally, Year-end (YEND) is observed to impact negatively on audit price as indicated by the slope coefficient (-0.2771) though significant at 10% (p=0.08) and this suggests undertaking audits with the peak periods may reduce the audit price other than in non-peak periods. The Durbin Watson statistics of 2.15 suggest the absence of serial correlation in the model. The Breusch-Pagan test for heteroskedasticity, Breusch-Godfrey Serial Correlation LM Test an Ramsey Reset test were performed as diagnostics for the

estimation and the result confirms the absence of heteroskedasticity, serial correlation and omitted variables bias in the estimation and hence the post estimation diagnostics suggest that the estimation results are valid and satisfies the necessary statistical conditions.

Discussion of Findings

Firm Size and Audit pricing

Firm Size (SIZE) appears to impact Audit price positively though not significant at 5% and hence we reject H1. However, though not significant, the variable has the expected sign (+) and this indicates that larger firms would have to pay higher audit price. The most dominant determinant of audit fees found across virtually all published studies is size, which is expected to have a positive relationship with fees (Simunic 1980). According to Steward and Munro (2007) compared to auditing small-sized clients, auditing large-sized client's makes a need of spending more time and effort. External auditors have to spend more time for client meetings, understanding client complicated internal control systems, designing more audit procedures and conducting more test of detail. Larger companies may have more effective internal control systems and thus it can be expected that auditors reduce audit procedures. To this end, as the fees paid to auditors depend on the amount of time to complete the job given, it is expected that larger companies have to pay higher audit fees. Our finding is in tandem with Joshi and Bastaki, (2000), Gonthier- Besacier and Schatt, (2017) Ahmed and Goyal, (2005).

Profitability and Audit Pricing

Return on Equity (ROE) appears to impact the Audit price negatively which is also significant at 5% as indicated by the slope coefficient (-0.0022) and p-value ($p=0.045<0.05$) and hence we accept H2. The result indicates that the audit price increases with reductions in return on equity. Client financial performance is often considered another measure of risk because it reflects the extent to which the auditor may be exposed to loss in the event that a client is not financially viable and eventually fails (Simunic 1980). In general, the worse the performance of the organization, the more risk to the auditor and the higher the audit fee is expected to be. Consequently, our finding is in line with theoretical expectation that the relationship between audit fee and return on assets will be negative. A meta-analysis conducted by Hay, Knechel and Wong (2004) revealed that three studies reported a significant positive result for return on equity, while seven reported a negative association.

Leverage and Audit Pricing

Leverage (LEV) exerts a negative but not significant impact on audit pricing as indicated by the slope coefficient (-0.0004) and p-value ($0.766<0.05$) and this suggests that a firm's leverage level could result in a decline in the Audit price and hence we reject H3. However, the findings in prior literature have been inconclusive. In their meta-analysis, Hay, Knechel and Wong (2004) notes that classifying these studies by country and time period suggests that leverage may have been important in the US in the 1980s, and in the UK to a lesser extent, but generally not important in other countries For example, six of the nine studies conducted in the US in the 1980's reported a significant relationship between fees and leverage while only one of 13 five conducted in Hong Kong in the 1990s yielded a significant result. Studies conducted in Norway, Singapore and Finland was insignificant with respect to leverage. These results suggest that the impact of leverage in audit fees varies across national environments.

Complexity and Audit pricing

Complexity (COMPLEXITY) appears to be positive and significantly related to Audit

pricing as indicated by the slope coefficient (0.0008) and p-value (0.05) and hence we accept H3. The result indicates that audit pricing increases with the complexity of firm especially with regards to the number of subsidiaries which was used as the measure for complexity in this study. Basically, audit fees are dependent on how long time auditors have to spend for an audit engagement. It means companies with complexity are charged higher audit fees. Auditee complexity is of interest in researching determinants of audit fees. (e.g Joshi and Bastaki, 2000; Gonthier-Besacrier and Schatt, 2017; Ahmed and Goyal, 2015; Thinggaard and Kiertzner, 2008; Simunic, 1980; Simon and Francis, 2008). The result of these studies is consistent with the view that auditee complexity has a positive relation with audit fees. Specifically, Joshi and Bastaki (2000), Thinggaard and Kiertzner (2008), reveals that audit fees are positively associated with the number of subsidiaries in foreign countries proxied for auditee complexity. Attempting to assess the relation between audit fees and the complexity of balance sheet composition, many authors (Simon & Francis, 2008; Gonthier- Besacrier & Schatt, 2017) find considerable evidences to suggest a positive association of audit fees and auditee complexity. In contrast however, Ahmed and Goyal (2005) however do not find such relation.

Auditee Fiscal Year-end Date

Finally, Year-end (YEND) is observed to impact negatively on audit price as indicated by the slope coefficient (-0.2771) though not significant at 5% ($p=0.08$) and hence we reject H7. This suggests undertaking audits with the peak periods may reduce the audit price other than in non-peak periods. This however, seem not to be consistent with theoretical expectation. Peters (2011) notes that majority of companies has the same fiscal year-end date of December 31 and this is also the case for companies in Nigeria and time around December 31 is called the busy season for auditors. In this period, auditors, especially auditors of big auditing firms usually have to work overtime and this result in a rise in audit price. Previous researches point out auditor behaviors can be affected by a higher demand for audit services during the busy season (Lopez and Sweeney and Summers 2002; Lopez and Peters, 2011). Though there are not many authors researching the relationship between audit fees and year- end date, available evidence (Gonthier-Besacrier and Schatt, 2007; Pong, 2004), show that we should expect the relationship with audit pricing to be positive.

Conclusion and Recommendations

The nature of audit pricing has attracted attention in recent times because of its effect on auditor independence and by implication the audit quality. Audit pricing has become an important area of research with significant implications both for auditors who are the providers of audit services and corporate entities that demand for audit services. Audit pricing has been analyzed within a market framework, where is determined primarily by the demand conditions of the users of audit services and the supply conditions of the providers of audit services. The findings of the study indicate that the Complexity (COMPLEXITY) appears to be positive and significantly related to Audit pricing. Leverage (LEV) exerts a negative but not significant impact on audit pricing. Return on Equity (ROE) appears to impact the Audit price negatively which is also significant at 5%. Firm Size (SIZE) appears to impact Audit price positively though not significant at 5%. Finally, Year-end (YEND) is observed to impact negatively on audit price as indicated by the slope coefficient though not significant at 5%. The study recommends that that there is the need for regulation of audit prices in the Nigerian environment. The market framework for determining the audit fees may not readily suffice as an advantage for the fostering of auditor dependence. Firstly, an auditor faces cost uncertainty, so the return (net income) from an engagement depends upon the fees paid by the client. Secondly, in the market for audit services the fear of losing the clients and revenues

generated from the various assurance activities may compromise the auditor's independence. Consequently, there may be the need to examine how regulation of the audit fee can help minimize the tendencies for declining auditor independence.

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