Li Falah-Jurnal Studi Ekonomi Dan Bisnis Islam
Volume 6 (No.1 2021) 15-24
P-ISSN: 2541-6545 E-ISSN: 2549-6085

Li Falah
Journal of Islamic Economics and Business Studies

journal homepage: http://ejournal.iainkendari.ac.id/lifalah

Internal Audit Function and Audit Fees: Evidence from Nigeria

Muqaddam Oyetunji Ali[1], Wan Amalina Bt. Wan Abdullah[2]
[1,2]*Faculty of Business Management, Universiti Zainal Abidin, Terengganu*, Malaysia
*email: *[1]alitunji@yahoo.com; [2]amalina@unisza.edu.my*

ARTICLE INFO

Article History:
Received 06 June 2021
Received in revised form 23 June 2021
Available online 30 June 2021

Keywords:
Audit fees, Internal audit, internal auditors

http://dx.doi.org/10.31332/lifalah.v6i1.2902

A B S T R A C T

This study analyses the relationship between audit fees and internal audit function in the Nigerian listed companies. This study observes 60 non-financial firms over four years (2012 to 2015) and uses a random effect regression model to examine the hypothesis. The result of the study found internal audits to be significantly related to the number of audit fees paid by the listed firms. Specifically, this study found internal audit expertise and size of internal audit units to have a positive and significant relationship with audit fees. In contrast, no association was documented between the internal audit certificate and the number of audit fees. The study concludes that companies with effective and adequate internal audit units tend to pay higher audit fees to external auditors.

1. Introduction

The internal audit (IA) unit is an essential link in an organization's financial reporting business, and the process is the internal audit (IA) unit. IA is critical to the organization because it identifies how to improve risk management and monitors its risk profile. Moreover, the IA has the objective to improve the efficiency and effectiveness of the organization through constructive criticism. There are five main components of IA: evaluating the logic and completeness of procedures, analysis of policy, verification of written records, and reporting recommendations for improvements to the management (Ejoh & Ejom, 2014).

IA is an essential mechanism of corporate governance that complements the activities of the board of directors and the audit committee. The internal corporate governance mechanism of a firm is made up of the interaction of these three actors (Ramly & Rashid, 2010). Yassin et al. (2012) posit that the quality of IA is essential for overseeing the board of

directors' effectiveness and continuous visibility and relevance of the IA. Hence, it is necessary to integrate the IA into a higher level of authority (Prawitt et al., 2009; Akinteye et al., 2015). Previous studies show that certain qualities are required of IA to be relevant and efficient in helping the audit committee monitor the firm's activities effectively and ensure financial reporting quality (Akinteye et al., 2015; Ejoh & Ejom, 2014).

The IA is crucial to companies as it provides services to its management in monitoring compliance to the government regulations and company policies, testing the internal control, and preventing fraud (Ali et al., 2012). It is also considered one of the vital components of risk management and its internal control structure (Anderson et al., 2012). The IA is carried out in different legal and cultural environments within organizations that differ in size, aim and structure, and individuals within or outside the organization (Fadzil, 2005). A survey conducted by the Malaysian Institute of Corporate Governance (MICG), the Institute of Internal Auditors Malaysia (IIAM), and Ernst and Young asserted that internal auditors are best placed on comprehending and articulating the business practices of the company, and they serve as consultants to lessen risks (Johl et al., 2013). By evaluating the governance, control, and risk management, the IA can help an organization fulfill its goals and improve its performance (Carcello et al., 2005).

Besides the IA, there is another corporate governance mechanism that oversees the relationship between the shareholders and the managers, one of which is the presence of external auditors who provide a significant supervisory role in testing the credibility of financial statements provided by management on behalf of shareholders (Lin & Liu, 2009). According to Al-Qadasi and Abidin (2018), large companies with high audit quality and solid corporate governance tend to pay substantial audit fees to create value for the organization. In addition, previous studies document that companies with adequate IA and effective corporate governance will hire among the Big4 auditors and pay high audit fees (Cassell et al., 2012, DeFond & Zhang, 2014). The companies believe that they will increase their value and increase the investors' confidence (Singh & Newby, 2010; Al-Qadasi & Abidin, 2018). Although, Hay et al. (2008) found that there will be lower audit fees when good corporate governance reduces the work intensity in the company, which means that the demand for the quality of auditors will decrease when there is adequate supervision by the company's internal mechanisms.

On the contrary, Srinidhi and Firth (2014) noted that high audit fees would be required for a company with good corporate governance and request quality audits. Moreover, companies that invest in IA also invest in external audits (Dzikrullah et al., 2020). This fact corresponds with the concept that investment into a mechanism will impact additional investment into other instruments (Beasley & Salterio, 2001). Despite the importance of IA,

there are limited studies that address the effectiveness of the IA in the literature (Ali & Handayani, 2018). Hence, several researchers have called for extensive research on the problems of IA its effectiveness (Ege, 2014). Therefore, the objective of this study is to analyze the association between audit fees and the characteristics of IA.

2. Literature Review

To respond to the growing ethical business practice, provide the transparent financial report, present cost management accurately, and improve corporate accountability, firms have continued to improve risk management practices, internal control, and, ultimately, governance practices (Hussain et al., 2018). However, despite the increasing focus on IA, there is limited literature that empirically studies the effectiveness of IA due to the lack of data availability. Most of the previous studies only rely on experimental or survey data. Moreover, earlier studies on IA have only examined the size of IA and the existence of IA.

One of the main supports for best practices on corporate governance is the existence and quality in a company (Prawitt et al., 2009). In addition, Al-Shetwi et al. (2011) suggest IA as an essential internal control of effective corporate governance. Also, IA is significant in creating a sense of security that contributes to the truthful presentation of financial statement and prevent fraudulent use of the company's assets (Gay & Simnett, 2007). As a result, it is essential to have an effective IA that encourages good governance. Hence, checking the quality of corporate governance in a company is by checking whether the company has a competent and reliable IA team.

Anderson et al. (2012) found the size of IA to be positive and significantly related to the use of sophisticated technology audit, the size of the organization, the number of foreign subsidiaries, missions focused on IT auditing, and the size of the audit committee. In addition, Carcello et al. (2005) document a positive influence of inventory, operating cash flow, leverage, and size on the firm's IA budget. Moreover, D'Onza et al. (2015) identify four factors that add value to the IA: objectivity and independence of the internal auditors.

Ho and Hutchinson (2010) found an association between accounting information disclosure and IA quality. The study revealed that firms would pay lower audit fees when they have high-quality IA because such a firm will vigorously protect the interest of the minority shareholders. Moreover, Johl et al. (2013) and García et al. (2012) posits that earnings management will be less likely when the firm has a high-quality IA. In addition, García et al. (2019) found a positive relationship between audit fees and the existence of IA. The study claimed that IA and external audit act as complementary mechanisms and not alternative means.

Furthermore, the internal auditors are parties that contribute to the internal supervision of the company (Felix et al., 2001). Also, researchers show that a company will pay high audit fees when there is effective governance because of adequate IA (Singh & Newby, 2010; DeFond & Zhang, 2014). Therefore, this study aims to relate how IA characteristics influence the number of audit fees paid to external auditors. Hence, we proposed the following hypothesis based on the above discussions:

H1: there is a positive effect of IA on audit fees.

3. Research Method

The sample used in this study involves 60 non-financial firms listed companies in the Nigerian stock exchange (NSX) from 2012 to 2015. Therefore, the data for this study were sourced from the annual accounts and reports of the companies collected from the NSX website and Thomson Reuter's data stream. In addition, the dependent variable in this study is audit fees. Audit fees are the amount a company pays concerning audit service performed by external auditors. At the same time, the independent variable used in this study is the IA function. This study measures IA as the number of internal auditors, internal personnel certification, and essential accounting expertise (Dzikrullah et al., 2020).

3.1 Empirical Models

This study employed panel data models to analyze the direct effect of audit fees and IA. In addition, this study uses the following linear regression model to test the hypothesis.

$$AF_{i,t} = \beta_0 + \beta_1 IAEXP_{i,t} + \beta_2 IASIZE_{i,t} + \beta_3 IACERT_{i,t} + \beta_4 FSIZE_{i,t} + \beta_5 LEVG_{i,t} + \beta_6 ROA_{i,t} + \beta_7 BIG4_{i,t} + \varepsilon_{i,t}$$

Where:
AF = audit fees
IAEXP = IA basic accounting expertise
IASIZE = size of IA
IACERT = IA certification
FSIZE = size of the firm
LEVG = operating leverage
ROA = return on assets
BIG4 = Big4 audit firm

3.2 Measurement of variable

The dependent variable of audit fees is measured as the natural log of auditor's fees. In addition, this study measures IA accounting expertise as a dummy variable, where one equal if the company has IA members with bachelor's in accounting and 0 if otherwise, size of IA is measured as several internal auditors in the company, IA certification is calculated as a dummy variable where one equal if the company have a certified auditor (CPA/CIA) as a member of

internal auditors and 0 if otherwise. All the measurements were adopted from Dzikrullah et al. (2020). Table 1 below summarizes the size of the variables used in this study.

Table 1: Variable Measurement

	Variable	Proxy	Source
Dependent variable			
Audit fees	AF	Natural log of audit fees	Annual report
Independent variable			
IA expertise	IAEXP	Dummy variable, one equal if the company has IA members with bachelor's in accounting and 0 if otherwise	Annual report
Size of internal auditor	IASIZE	number of internal auditors in the company	Annual report
IA certification	IACERT	Dummy variable, one equal if the company have a certified auditor (CPA/CIA) as a member of internal auditors and 0 if otherwise	Annual report
Control variable			
Firm size	FSIZE	Natural log of total assets	Thomson Reuter
Leverage	LEVG	Total debt divided by total assets	Thomson Reuter
Return on assets	ROA	Earnings before interest and tax divided by total assets	Thomson Reuter
BIG4	BIG4	Dummy	Thomson Reuter

4. Result and Discussions

4.1 Descriptive statistics

The summary of the descriptive statistics of the dependent and independent variables is presented in Table 2. This study observes 60 firms over four years, making the total observation 240 firm-year. The table shows that the mean audit fees are ₦ 43,892,000 with a minimum of ₦ 3,175,000 and a maximum of ₦ 102,251,000. Moreover, the average number of internal auditors is 32, with a maximum of 58 members. Also, 72.2% of the firms have internal auditors with an accounting background, while only 21.1% have a certified auditor.

Table 2: Descriptive Statistics

Variable	N	Mean	Minimum	Maximum
AF (₦)	240	43,892,000	3,175,000	102,251,000
IAEXP	240	0.7220	0	1
IASIZE	240	32	12	58
IACERT	240	0.2110	0	1
FSIZE (₦)	240	2,365,000,000	856,000,000	16,423,000,000
LEVG	240	0.422	0.012	0.911
ROA	240	0.480	0.017	0.876
BIG4	240	0.230	0	1

4.2 Diagnostic Tests

This study goes through some diagnostic tests to account for the cross-sectional and time-series dimensions of the data. Specifically, this study carried our test on multicollinearity, correlation, heteroskedasticity, and variance inflation factor (VIF).

Variance Inflation Factor

The result of the multicollinearity through VIF shows that there is no problem of multicollinearity in this study as the model is within the acceptable range of 10 VIF and more than 10% tolerance value (Hair et al., 2014).

Table 3. VIF

Variables	VIF	1/VIF
AF (₦)	2.34	0.7062
IAEXP	1.12	0.8826
IASIZE	1.31	0.8101
IACERT	1.12	0.8911
FSIZE (₦)	1.41	0.7671
LEVG	1.21	0.8312
ROA	1.21	0.8387
BIG4	1.09	0.9011
Mean	1.32	

Heteroscedasticity Test

The result displayed in Table 4 shows the model is significant as the reported p-value is less than 0.05. This data indicates that the null hypothesis is rejected, indicating a problem heteroscedasticity in the model.

Table 4. Breusch-Pagan / Cook-Weisberg Test for Heteroskedasticity

Chi2(1)	Prob›chi2	Null (H0)
182.2	0.0000	Rejected

Autocorrelation Test

Table 5 shows that the regression model suffers from an autocorrelation problem because the p-value is significant at 5%. Hence, this study rejects the null hypothesis.

Table 5. Wooldridge Test for Autocorrelation

F (1,27)	Prob › F	Null (H0)
5.342	0.0213	Rejected

Test for Model Specification

The Hausman test was carried out to determine the best fit model between the fixed and random effects. As displayed in Table 6, the result shows that the null hypothesis is accepted. Hence the random effect model is appropriate in this study.

Table 6. Hausman Test

Chi2 (13)	Prob › chi2	Null (H0)
4.43	0.6721	Accepted

4.3 Main analysis

This study examines the relationship between the characteristics of IA function and audit fees in the Nigerian stock exchange. As shown in Table 7, the result of the regression model shows that the overall model is fit and significant at 1% (F statistics 0.0000), and the R^2 value shows 72.3%, which indicates that the variance of 72.3% in audit fees is explained through the independent and control variables.

Table 7. Regression Model

Variables	Predicted sign	Coefficient	P-value
IAEXP	+	0.537	0.083*
IASIZE	+	2.894	0.000***
IACERT	-	-0.118	-0.432
FSIZE	+	0.238	0.000***
LEVG	+	0.432	0.032**
ROA	+	0.897	0.045**
BIG4	+	0.763	0.000***
_cons	+	6.654	0.000***
Year dummy			*Included*
Industry dummy			*Included*
R^2			*0.723*
N			*240*

Note: ***, ** and * represent significant at 1%, 5% and 10% levels respectively

The regression results show that IA has a positive and significant relationship with the audit fees paid to the external auditors. This data indicates that there will be an increase in the supervision of the company through the external auditors if the company has an excellent IA function. Hence, the company will be willing to pay high audit fees. This data is consistent with the findings of Dzikrullah et al. (2020) and Al-Qadasi and Abidin (2018). They also show that the company will be willing to pay high audit fees to achieve high auditor quality when they have solid internal governance. Specifically, the result indicates that IAEXP has a positive and significant relationship with audit fees. Furthermore, this information suggests that firms with accounting experts in the IA will be willing to pay high audit fees.

Moreover, this study shows a positive and significant relationship between IASIZE and audit fees. This data indicates that the size of IA positively influences the number of audit fees paid to the external auditors. At the same time, this study documents no relationship between audit fees and IACERT. As expected, this study found all the control variables to be positive and significantly related to audit fees in terms of the control variables.

5. Conclusion

As stated earlier, the purpose of this study is to analyze the influence of IA characteristics on audit fees of non-financial listed companies on the NSX from 2012 to 2015. This study found IA to have a positive and significant relationship with audit fees as a corporate governance mechanism. This information indicates that companies with effective and adequate IA functions will prefer to use the service of the Big4 external auditors and consequently pay high audit fees. Inconsistent with the predicted directions, this study found IAEXP and IASIZE to have a significant positive relationship with audit fees. In contrast, IACERT has an insignificant negative association with the audit fees paid to the external auditors. In addition, this study used four control variables: firm size, leverage, ROA, and Big4 auditors. The regression model results show that firm size is significantly related to audit fees. The means that large firms tend to pay high audit fees. More so, leverage has a significant and positive relationship with audit fees. Meaning that company that operates with a high debt ratio will require the service of professional auditors and thus, pay high audit fees. Also, ROA shows a significant relationship with audit fees while Big4 auditors indicate a positive and meaningful relationship with the company's audit fees. Inconsistent with previous studies, this study has its limitations. Among others, data used in this study were randomly gathered from 60 non-financial listed firms in NSX. Hence, future studies should consider all the listed firms in NSX. In addition, due to adequate data availability, this study only covers four years (2012 to 2015). Future studies may consider a more extended period to generalize the result from this study.

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