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EFFECT OF AUDIT TENURE AND INVESTMENT IN PROPERTY, PLANT, AND EQUIPMENT ON TAX AVOIDANCE OF LISTED FINANCIAL FIRMS IN NIGERIA

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Abstract

The study investigates the influence of audit tenure and investment in property, plant, and equipment (PPE) on tax avoidance in Nigerian financial companies. The study examined a sample of 40 financial firms listed on the Exchange Group between 2015 and 2021. By utilizing a robust regression model, the findings of this study indicate that while audit tenure does not significantly impact tax avoidance, there is a significant association between investment in PPE and a decrease in tax avoidance among Nigerian financial firms. Specifically, the results suggest that for every 1% increase in PPE investment, tax avoidance decreases by approximately - 0.05%. Based on these conclusions, it is recommended that the Finance Act 2023, which was signed into law on 28 May 2023 by the previous Administration of Muhammadu Buhari and eliminates Section 32 of the CITA (provision for reconstruction investment allowance on qualifying plants and equipment), be reconsidered by the current national assembly. These findings hold important implications for policymakers and financial firms in developing nations, as they affirm the importance of maintaining appropriate audit tenure and making sufficient investments in PPE for effective tax administration. Further, the study identified the need to capture unregistered taxpayers, Tax evaders and Delinquent taxpayers in the tax net as additional strategies that can enhance tax compliance.

Keywords: Audit Tenure, Property, Plant, and Equipment, Corporate Tax Avoidance, Financial service firms

1. Introduction

Since the introduction of tax legislation, the issue of tax avoidance has become a subject of interest for tax administrators, practitioners, policymakers, and researchers worldwide. Governments rely on tax revenue as a crucial source of income for providing essential services and improving the standard of living for their citizens. However, the ability of governments to fulfil these obligations is compromised when there is a significant reduction in tax revenue due to corporate tax avoidance. All resident businesses are required to pay taxes on their domestic and international profits to the government.

Insufficient tax income hampers the government's efforts to enhance the well-being of its citizens through initiatives such as infrastructure development, education, healthcare, and social welfare (Slemrod, 2004).

Many businesses exploit loopholes in tax laws to avoid paying taxes, which in turn reduces their tax liability and profit margins. According to a 2018 report by the International Monetary Fund (IMF), Nigeria had the lowest revenue-to-GDP ratios from 2011 to 2017, averaging around 5.9%. Consequently, the ratio of government revenues to GDP dropped significantly from 17.7% to 5.1%. The report also

highlighted a slight decline of 0.1% in the ratio of corporate income tax (CIT) to GDP between 2016 and 2018. Data collected from the Federal Inland Revenue Service (FIRS) indicated substantial shortfalls in CIT revenue, estimated at 9.6%, 47.9%, 28.7%, and 19.8% for the years 2015, 2016, 2017, and 2018, respectively (Lestari & Nedyia 2019)

Moreover, a report published by the FIRS indicated that the total tax collection for the fiscal year 2021 surpassed the projected amount by 8.6%. The report emphasized that Value Added Tax, Petroleum Profit Tax, Stamp Duties, and Capital Gain Tax played a crucial role in driving this impressive tax revenue performance. These taxes contributed to a substantial increase in the targeted tax revenue, with growth rates of 12.7%, 22.7%, 105.6%, and 141.1% respectively. Specifically, Petroleum Profit Tax accounted for approximately 31% of the country's tax collection, amounting to ₦2,008.34 billion. Value Added Tax, on the other hand, contributed 32% of tax revenue, equivalent to ₦2,072.85 billion. Company Income Tax had the lowest contribution, with ₦1,896.44 billion, constituting 30% of tax collection (FIRS, 2021). Despite these positive trends, companies' income tax revenue experienced a decline of 4.6% in the 2021 fiscal year, falling from the targeted figure of ₦1,988.6 billion to an actual collection of ₦1,896.4 billion.

Regarding the impact of audit tenure on tax avoidance, studies have presented diverse findings. Tarmidi et al. (2020) demonstrated that audit tenure has a significant negative effect on tax evasion. In contrast, Lestari and Nedyia (2019) discovered a favorable association between audit tenure and tax avoidance. Supporting the latter perspective, both Brooks and Sun (2020) and Salehi et al. (2019) conducted research that confirmed the positive impact of audit tenure on reducing tax avoidance.

Companies Income Tax (CIT) Act CAP. 21, L.F.N. 2004's Section 23 provision divided income produced by businesses into taxable and non-taxable categories. The capital allowance offered on qualifying capital expenditures, notably on PPE, is one of the loopholes in tax administration. The CIT

Act of 2004 states in section 32 subsection (1) that "where a company has incurred an expenditure on plant and equipment there shall be allowed to that company an investment allowance as provided in subsection (2) of this section and shall be in addition to an initial allowance under the second schedule to this Act". The rate used to calculate investment allowance under Section 32 Subsection (2) is 10% of the actual expenditure made on such plant and equipment. This suggests that in the case of a company choosing to spend heavily on PPE, the sizeable amount of its investment allowance will significantly lower the accounting profit displayed on Income Statements when calculating taxable income. Additionally, this will lead to a low effective tax rate, which is a hint that a company is engaging in tax avoidance.

The findings of previous research, however, are inconsistent concerning the specific characteristics of enterprises. According to the measure of tax avoidance used in their investigation, Minnick and Noga (2010) found that the influence of firm size on tax avoidance varied depending on the firm size. The Generally Accepted Accounting Principles (GAAP) Effective Tax Rate (ETR) is a measure of tax avoidance that has a positive impact on tax, as opposed to cash ETR, which has a negative impact.

In line with the forgoing discussion and the objectives of our study, the following hypotheses are formulated:

H₀₁: Audit tenure has no significant impact on tax avoidance of listed financial firms in Nigeria

H₀₂: Investment in PPE has no significant impact on the tax avoidance of listed financial firms in Nigeria.

Tax administrators, taxpayers, policymakers, and the government at large can all benefit from the study. As the Company Income Tax (CIT) administrator, the FIRS will also be able to identify some gaps in its CIT administration as a result of this analysis and may perhaps take major steps to close those gaps. Thirdly, potential causes of business tax avoidance

are of great interest to academic scholars.

In order to have a foundation of what other scholars have done in the area, the subsequent section (Section Two) of this study is a survey of the literature, both theoretical and empirical. Additionally, the part covers alternative theories of tax avoidance studies, including Hoffman's tax planning theory and signaling theory that underpin the study. Section three follows, and it focuses on the approach that was used to conduct the study to get accurate results. These include the population of the study and the sampling methods used, the method used in data collection and the technique of data analysis, the definitions of the variables, and the study's specific model. The discussion of the findings from the analysis and testing of hypotheses is covered in Section 4, and the work is summarized and concluded in Section 5.

2. Literature Review and Theoretical Framework

2.1 The concept of tax avoidance

Tax avoidance is usually used interchangeably with tax management, tax planning, and tax aggressiveness (Dyreng et al., 2008; Minnick & Noga, 2010). This indicates the wide view of the meaning of tax avoidance. Hanlon & Heitzman (2010) opined that there is no generally accepted definition for the term corporate tax avoidance. However, in recent time tax avoidance is becoming a complex phenomenon construed in different ways by different parties depending on the motives employed. But Dyreng et al. (2008) and Hanlon and Heitzman (2010) pointed out that this definition does not differentiate between tax-favored real activities, tax planning that is explicitly undertaken to avoid tax payments, and/or tax benefits expected from lobbying. Several studies followed to propose a new perception of the matter (Slemrod, 2004). These studies linked the theme of corporate tax avoidance with the agency theory developed by Jensen and Meckling (1976).

The concept of tax avoidance is explained concerning taxpayers' compliance to meet the tax obligation. The act of non-compliance by taxpayers is generally measured and compared to the amount of

tax saving, tax avoidance, and tax evasion meant to minimize tax liability. This is done through numerous ways ranging from tax exemptions, tax deductions, tax incentives, non-taxable income, tax suspensions, bribery, and counterfeiting (Yuniarsih, 2018).

Measurement of tax avoidance

One of the main challenges faced in corporate tax avoidance studies is the measurement of the phenomenon. Even though there are different opinions among tax researchers on the measurement of tax avoidance, effective tax rate and book-tax difference are commonly used. Effective Tax Rate (ETR) is computed as the ratio of some estimate of tax liability to a measure of profit before tax profits which takes care of the average rate of tax per naira of income or cash flow. ETR is classified into two – the Generally Accepted Accounting Principles (GAAP) ETR and the cash ETR. The GAAP ETR is measured as the ratio of total income tax expense to income before taxation (Hanlon and Heitzman, 2010). On the other hand, the Cash ETR is computed as cash taxes paid for the year divided by total profit before tax. This measure of ETR, unlike the GAAP is affected by tax deferral strategies but is not affected by changes in the tax accounting accruals. Another measure of tax avoidance is the book-tax differences which are defined as differences between book and tax reporting of the same transaction. The study further established that when BTDs are scaled by pre-tax book income, the results are statistically equivalent to ETRs. Based on this argument, this research adopted the effective tax rate as a proxy for tax avoidance.

The concept of audit tenure

The length of the employment agreement between the company and the auditor is known as the audit tenure. The length of the partnership will foster a close relationship with management, which may lead auditors to place management over the public in order of interest to weaken their common sense of impartiality. According to Salehi et al. (2019), the quality of audit consulting services will enhance to lessen the tax burden if the auditor and client have a long-lasting working relationship. The auditor's

extended stay may result in a close relationship with the client, who may participate in tax avoidance schemes.

Consequently, audit tenure is referred to the number of years that an accounting firm is engaged cumulatively by the financial service firms before re-engagement. It should be noted that the CBN must give its approval before any external auditors are appointed by any financial service firm. The maximum tenure for auditors in a specific financial company shall be ten (10) cumulative years, beyond which the audit firm shall not be reappointed in the financial company until five more (5) consecutive years have passed.

The concept of corporate investment

Corporate investment refers to the general activity undertaken by a company to acquire positive benefits for its growth and development. Widuri et al. (2020) suggest that corporate investment involves allocating specific funds with the aim of preserving or increasing the company's value and generating positive returns. To achieve these anticipated benefits, careful investment planning is necessary to ensure that neither insufficient nor excessive investments are made. Effective leadership must pay close attention to strategy and prepare an optimal investment plan to maximize outcomes.

In Nigeria, there are several tax incentives in place to encourage investment in key sectors of the economy. These incentives include investment allowances, tax holidays, incentives for rural locations, export incentives, export expansion grant (EEG) schemes, incentives for gas utilization, tourism incentives, interest incentives, foreign tax credits, and the road infrastructure development and refurbishment investment tax credit scheme. An investment allowance of 10% is available for qualifying expenditures on plant and machinery, allowing companies to deduct this amount from their assessable profits in the year of purchase. Companies in the mining, manufacturing, and agricultural sectors face no restrictions on fully claiming capital allowances in any assessment year.

2.2 Empirical Review

Previous studies conducted on tax avoidance practices focused on different variables affecting tax avoidance. These studies provide empirical evidence on the effect of audit tenure variables and investment in PPE on corporate tax avoidance as reviewed accordingly.

Audit tenure and tax avoidance

Previous research has yielded conflicting results regarding the relationship between audit tenure and tax avoidance in different countries. For example, Lee and Kao (2018) found that tax avoidance decreases with longer audit tenure. In contrast, Lestari and Nedya (2019) examined manufacturing companies listed in Indonesia and concluded that audit tenure has a positive impact on tax avoidance. Brooks and Sun (2020) analyzed a large sample of firm-year data and observed a positive and significant relationship between audit tenure and tax avoidance.

Tarmidi et al. (2020) focused on consumer goods firms in Indonesia and found that audit tenure has a significant negative impact on tax avoidance. Conversely, Rizqia and Lastiati (2021) studied manufacturing firms in Indonesia and Malaysia and found that audit tenure was not significant in affecting tax avoidance. Monika and Noviari (2021) examined mining businesses in Indonesia and found that audit tenure and capital intensity did not influence tax avoidance.

Chyz et al. (2021) investigated tax risk and avoidance in relation to audit services for tax compliance and planning. They found that tax avoidance was more pronounced for companies with higher tax and operational complexity, as well as for clients of auditors with greater tax competence and longer audit tenure. Rivero-Blanco and Fernández-Rodríguez (2021) analyzed non-DMBs listed in Spain and discovered that the degree of tax avoidance is influenced by audit quality, with audit tenure having an irrelevant impact on larger tax-aggressive firms but a more significant impact on

firms with less aggressive behavior. Zain et al. (2022) investigated auditor characteristics and tax avoidance in non-financial firms listed in Indonesia, but found no impact of audit tenure on tax avoidance. Overall, the relationship between audit tenure and tax avoidance is complex and varies across different studies and contexts.

Corporate investment and tax avoidance

Research on the relationship between corporate investment and tax avoidance is limited, and the existing studies do not directly establish a clear link between the two. Olaleye et al. (2016) examined the impact of reduced company income tax incentives on Foreign Direct Investment (FDI) in the Nigerian manufacturing sector and found a strong positive relationship between them.

Cen et al. (2017) investigated whether companies with close supplier-customer relationships are more likely to engage in supply-chain tax avoidance tactics. The study revealed that major customers and their suppliers tend to engage in more tax avoidance activities compared to other businesses, with profit-shifting tax strategies involving investments in tax haven jurisdictions. Tax advantages also played a role in the decisions made by dependent suppliers and major customer firms.

Le and Kao (2018) explored the influence of auditor characteristics on tax avoidance behavior after the adoption of International Financial Reporting Standards (IFRS). Their findings indicated that investment in property, plant, and equipment (PPE) increases tax avoidance practices.

Khurana et al. (2018) investigated the relationship between investment efficiency, corporate tax avoidance, and managerial skills in listed firms in the United States. The study found a positive association between tax avoidance and investment efficiency, with managerial ability moderating this relationship.

Ding (2019) examined the impact of corporate tax avoidance on investment efficiency, considering information asymmetry and agency conflicts. The

study showed a positive relationship between tax avoidance and investment efficiency.

Nwonyuku (2019) focused on the effects of capital allowances for Nigerian companies' income tax purposes. The study suggested that a well-implemented capital allowance system strengthens corporate investment in non-current valuable assets, enhances tax revenue effectiveness, and promotes tax compliance culture.

Pratiwi et al. (2019) investigated the impact of corporate governance and audit quality on tax aggression, considering family ownership as a moderating factor. Their study, conducted on manufacturing firms listed on the Indonesia Stock Exchange, found that investment in PPE increased tax avoidance.

Hasan and Habib (2021) explored the association between corporate tax avoidance and asset redeployability in the USA. They found that asset redistribution plays a direct and indirect role in reducing tax avoidance by alleviating financing constraints.

Ngelo et al. (2022) examined the investment efficiency of Indonesian firms engaging in tax avoidance and found a positive connection between tax avoidance and investment efficiency. The study also highlighted that this relationship exists for firms characterized by both under and over-investment tendencies.

2.3 Theoretical framework

The tax planning theory by Hoffman and agency theory are pertinent theories for research on tax avoidance. The Hoffman tax planning theory's primary target is corporate firms that have a propensity of diverting corporate returns to businesses other than the government (Hoffman, 1961). The intricate nature of tax procedures and structures creates inadvertent legal loopholes that can give taxpayers an advantage in their tax situation. Hoffman (1961) acknowledged the part that tax costs play in tax planning strategies. Since tax advantages from tax preparation outweigh tax costs, the idea

suggested that there is a positive correlation between tax planning and corporate performance. The dynamics of tax planning and market performance are outside the purview of Hoffman's tax planning theory. A thorough tax planning theory is essential as capital markets mature and the separation of ownership and control of corporate entities spreads. The empirical viewpoint is used to fulfill this demand rather than the theoretical perspective (Inger, 2012). The necessity of tax planning for corporate entities is also emphasized by Scholes et al. (1992) framework for tax planning. Scholes and Wolfson contend that a successful business is correctly tuned toward its tax environment.

A thorough research that takes into account tax planning, corporate governance, and firm success was provided by Desai and Dharmapala in 2007. The findings indicate that there is little difference between zero and the average effect of tax preparation on corporate performance. So, there is no connection between tax preparation and business performance. However, the analysis finds a link between performance for well-governed enterprises and tax planning savings. Thus, Desai and Dharmapala (2007) concluded that corporate governance mediates the relationship between tax planning and firm performance. Abdul-Wahab (2010) discusses the connection using the cost and risk of tax preparation in a previous study. According to the report, the costs and hazards of tax preparation could prevent shareholders from receiving the benefits they were intended to. According to the researcher, when tax planning activities grow, the costs and dangers

In contrast, agency theory states that the shareholders are the principal and the company's managers are the agents. Shareholders have given management the authority to make decisions, but typically the managers hesitate to do so because doing so would defeat the objective of the primary. Effective corporate governance procedures are needed to stifle agent activity. But when management shows opportunistic behavior and diverts corporate money for their gain, disputes arise between the shareholders, who own the company, and its

management (Jensen and Meckling, 1976; Desai and Dharmapala, 2009).

As a result, both the Hoffman tax planning theory and the agency theory serve as the foundation for this study.

3. Methodology

To determine the impact of independent variables on the dependent variable, this study employs a quantitative research design approach. A total of 53 financial service firms publicly trading on the NSE as of December 31, 2020, comprise the study's population. This includes fourteen (14) Deposit Money Banks, twenty-seven (27) insurance companies, one (1) microfinance bank, five (5) mortgage carriers, and six (6) other financial institutions. This sector is a tremendous performer in the Nigerian economy, accounting for approximately 70 percent of market capitalization, which justifies employing it as the study population (NSE, 2018). Appendix A displays the population as a whole.

The nature of this study requires the collection and use of quantitative data obtainable from the annual financial statements of financial service firms. As such, the study adopts a filtering method in arriving at the sample size. The sample size consists of firms that were active in the sector within the period of study issuing complete financial statements consecutively during the periods of study (Suyono, 2018; Yusuf, 2018). And firms listed continuously on the Exchange Group from 2015 to 2021. However, twelve (12) were eliminated after applying the first filter while only UNIC Diversified Holdings Plc was eliminated when the second filter was applied. This resulted in a sample size of forty firms which is approximately 75.5% of the population. Results obtained from the analysis will be used to generalize conclusions on the total populations in the financial service companies operating in Nigeria for the period of the study.

The published financial accounts of the 40 financial service firms for the study period provided data on all the dependent and independent variables. This generated a balanced panel data set of 280 observations with 40 financial service firms over

seven years (2015 to 2021). Multiple regression is utilized for data analysis because of the dynamic panel effect of the data. To do this, the study conducted pre-estimation tests for normality, serial correlation, and multicollinearity. In addition, post-estimation tests for heteroscedasticity and model

specification were conducted after estimating the Ordinary Least Square (OLS) regression model results.

The variables specified in the models are measured in Table 1 below:

Table 1: Variables measurement and sources

Variable	Acronym/Type	Definition/Measurement	Sources
The effective tax rate	ETR/Dependent	Tax expense/pre-tax income	Lestari & Nedya (2019);
Audit Tenure	AUDTEN/ Independent	The number of successive years that an audit firm is engaged by a firm	Salehi et al. (2019) Brooks & Sun (2020)
Investment in PPE	INVPPE/ Independent	Total Investment in PPE (in thousand naira)	Lee & Kao (2018), Pratiwi et al. (2019)
Firm size	FSIZE/Control	Natural log of total assets	(Ogbeide, 2017); Eguavoen (2019)

Source: Authors' Compilation, 2023

Following the discussions, the model specification is modified from the works of Kanagaretnam et al (2015) as follows:

Whereas TAXAGGR indicates tax avoidance variable (TAXAVOID) measured as one if TAXAVOID is in the top level and zero otherwise, BIGN represents auditor quality, and CONTROLS is a direction of firm and country-level controls, and YEAR_FE and IND_FE are indicators of time and industry respectively.

In line with our objectives, the following relationship is established: Tax Avoidance = f (AuditTen, InvestPPE) Where Tax Avoidance is proxied by ETR, AuditTen stands for audit tenure, and InvestPPE means investment in PPE. This provides the following model:

$$ETR_{it} = \beta_0 + \beta_1 AUDTEN_{it} + \beta_2 INVPPE_{it} + \varepsilon_i \quad (1)$$

Prior studies such as Ogbeide (2017) and Eguavoen (2019) documented that firm size is associated with corporate tax avoidance. For this reason, this study used firm size as a control variable. The inclusion of this control variable in model one gives:

$$ETR_{it} = \beta_0 + \beta_1 AUDTEN_{it} + \beta_2 INVPPE_{it} + \beta_3 FSIZE_{it} + \varepsilon_{it} \quad (2)$$

Where

ETR = Effective Tax Rate

AUDTEN= Audit tenure

INVPPE = Investment in PPE

FSIZE = Firm size

$\beta_1, \beta_2, \beta_3$ = coefficients of the estimated variables. ε = error or disturbance term

i= Number of Firms in the observation

t= Number of periods in years

Therefore, the model specified above (model two) will be used to test the two hypotheses of the study.

4. Results and Discussions

This section displays the data that was utilized in the study, paying particular focus to the summary of the descriptive statistics making use of mean, standard deviation, minimum value, and maximum value for the dependent variable and independent variables. The relationship between the dependent variable and the explanatory variables is then explained using a correlation matrix. Following the completion of pertinent robustness tests to guarantee the accuracy of the data given and analyzed, a summary of the regression results computed using Stata is offered.

4.1 Descriptive Statistics

The descriptive statistic results are displayed in Table 2 showing the mean and standard deviation, the smallest

and highest values as well as skewness and kurtosis for the variables. This discussion is intended to show the

patterns of all variables used in the study (both dependent and independent)

Table 2: Descriptive Analysis

Var.	Mean	Std. Dev.	Min	Max	Skew	Kurt.	Obs.
ETR	0.156	0.156	-0.526	0.806	0.930	7.021	280
AUDTEN	2.457	1.468	1	7	0.908	3.131	280
INVPPE	33,257.120	83,251.110	17.486	680,000	3.947	22.149	280
FSIZE	806,672.5	1,884,616	2,640.583	11,700,000	3.148	13.533	280

Source: Author's computation using STATA version 11 Software, 2023.

Table 2 reports the summary of one dependent variable, two independent variables, and one control variable for 40 companies over seven years. The overall mean of the effective tax rate is 0.156 with an approximate standard deviation of 0.156. This means that the effective tax rate can deviate from the mean to both sides by 15.6 percent. This indicates that there is no high spreading from the mean of effective tax rate recorded within the period under study. The lowest effective tax rate recorded within the period is -0.526 which is because some companies pay lower taxes based on their pre-tax book income. This may not be unconnected with the high deferred tax balance in the statement of comprehensive income. The highest value of the effective tax rate was 0.806 which is approximately 81 percent. The outcome demonstrates that the effective tax rate violates the premise of symmetrical distribution's criterion of zero skewness by having a 0.930 coefficient of skewness, which is positively skewed. On the other hand, it also has a 7.021 kurtosis coefficient, which is larger than the Gaussian distribution's allowed value of 3. This analysis indicates that the values of the effective tax rate in this study are not normally distributed (Gujarati & Porter, 2009).

The overall mean of the audit tenure variable is 2.457 with an approximate standard deviation of 1.468. This means that audit tenure deviates from its mean value to both sides by only 1.468. The lowest audit tenure value recorded during the period was one while the highest audit tenure was 7. This indicates that none of the financial firms exceed the maximum 10 years allowed by the CBN corporate governance codes within the studied period. This result implies that most of the studied financial service firms do not engage their

external auditors for more than ten years terms consecutively. The data do not, however, meet the symmetrical distribution requirement of zero because of the data's positive skewness, as indicated by the coefficient of skewness, which is 0.908. From the results, it is also observed that the coefficient kurtosis of audit tenure is 3.131, which does not meet the Gaussian distribution criteria of 3.

Looking at the results for investment in the PPE variable displayed in Table 2, the mean value was 33.257 billion naira with a standard deviation of 83.251 billion naira. This also indicates that there is high dispersion from the values of mean investment in PPE among financial service firms in Nigeria. The financial service firm with the lowest investment in PPE of 17.486 million naira was FCMB in the year 2018 whereas the financial service firm that invested the highest amount of 680 billion naira in PPE was FBN in the year 2017. However, results in Table 2 display that there is a 3.947 coefficient of skewness which is positively skewed and also violates the assumption of symmetrical distribution of zero skewness. In addition, the Gaussian distribution criterion of three for kurtosis is violated because the variable has a 22.149 coefficient of kurtosis.

The descriptive statistics results in Table 2 show that the listed financial service firms in Nigeria had an average firm size (measured by total assets) of 806.673 billion naira, with a standard deviation of 1.885 trillion naira, indicating a wide range of variation from the mean. This suggests that the methods used to finance the assets of Nigeria's listed financial sector companies vary. As can be observed from the results, Omoluabi

Mortgage Bank Plc recorded a minimum of 2.641 billion naira in 2015, while Eco Bank Transnational incorporated recorded a high of 11.7 trillion naira in 2021. The outcome demonstrates that the premise of a symmetrical distribution criterion of zero skewness is violated by the 3.148 coefficient of skewness, which is positively skewed. In addition, it also has a kurtosis coefficient of 13.533, which is greater than the Gaussian distribution's default value of 3 for kurtosis.

4.2 Data Normality Check

After analyzing the descriptive statistics of the data that was gathered for the study's variables, it is clear that the data are not normally distributed. To determine statistically whether the data of the variables used in this study follow the normal distribution or not, the study uses the Shapiro-Wilk test displayed in Table 3.

Table 3: Results of the Normality test using the Shapiro-Wilk W test

Variable	Obs.	W	V	Z	Prob
ETR	280	0.909	18.174	6.785	0.00000
AUDTEN	280	0.954	9.284	5.208	0.00000
INVPPE	280	0.453	109.719	10.991	0.00000
FSIZE	280	0.491	102.003	10.820	0.00000

Source: Author's computation using STATA version 11 Software, 2023.

Table 3 displays the outcomes of the normality test conducted using Shapiro-Wilk, given that it is the most effective normality test (Razali & Wah, 2011). All probabilities of the affected variables are less than 1% which implies that all variables of the study are not normally distributed. As a result of this non-normality of data, the study employed Spearman rank correlation to establish the relationship between the variables of the study (Gujarati & Porter, 2009).

4.3 Multicollinearity Check

Multicollinearity exists when at least two explanatory variables highly correlate with each other. This will

inflate the standard error of variable coefficients and as such the regression model estimations of the coefficients turn out to be unstable. To check for multicollinearity of the data used, this study employed the Variance inflation factor (VIF) and tolerance values. The general rule of thumb holds that the VIF value of a variable must not be more than 10 and the tolerance value (the reciprocal of VIF), should be at least 0.1. The results in Table 4 show that the tolerance value and VIF for all variables are more than 0.1 and less than 10 respectively. This suggests that there is an absence of multicollinearity among the independent variables of this study (Gujarati & Porter, 2009).

Table 4: Variance Inflation Factor and Tolerance values

Variable	VIF	1/VIF
FSIZE	2.60	0.385
INVPPE	2.57	0.389
AUDTEN	1.02	0.985
Mean VIF	2.06	

Source: Author's computation using STATA version 11 Software, 2023.

4.4 Correlation Matrix

Table 5 contains correlation values between explained

and explanatory variables along with the correlation between explanatory variables themselves.

Table 5: Spearman Correlation Coefficients

Var.	ETR	AUDTEN	INVPPE	FSIZE
ETR	1			
AUDTEN	-0.0934	1		
INVPPE	0.0336	0.0242	1	
FSIZE	-0.1452	0.0990	0.6476	1

Source: Author's computation using STATA version 11 software, 2023

The results in Table 5 show the coefficient of correlation between audit tenure and the effective tax rate is -9%. This negative correlation indicates that those firms using one audit firm for a considerable number of years by re-engaging their services record a decrease in their effective tax rate. In addition, the amount of investment in PPE, and its correlation with the effective tax rate of financial service firms in Nigeria stands at 3%. This points out that any increased investment in PPE increases the effective tax rate of financial service firms in Nigeria. Considering the relationship among the explanatory variables, the results in Table 5 depict a range of relationships between 2%, which is AUDTEN and INVPPE; and 65% for FSIZE and INVPPE. These results show that there is an absence of multicollinearity among the regressors.

4.5 –Homoscedasticity check

A heteroscedasticity test is conducted using Breusch-Pagan/Cook-Weisberg to check whether the variability of error terms is constant or not. The presence of heteroscedasticity signifies that the variation of the residuals or term error is not constant. The result of the test reveals that the residuals of the data are homoscedastic because the probability of the chi-square is less than 5% ($P = 0.0001$) as shown in Table 6. This implies that there is a presence of heteroscedasticity and as such, the study used robust regression for the analysis to correct this problem. A robust regression is created to address the issue of outliers and substantial observations in the data and reduce their influence on the regression results (Zaman et al., 2001).

Table 6 Results of the Heteroscedasticity Test

Tests Statistics	chi2 Value	Probability of Chi2
Heteroscedasticity Test	16.23	0.0001

Source: Author's computation using STATA version 11 software, 2023

4.6 – Regression results

summarized in Table 6:

The results of the robust regression model are

Table 7: Robust regression results

Variables	Coefficient	T-Val.	Sig
AUDTEN	-0.0031	-0.63	0.527
INVPPE	0.0472	4.21	0.000
FSIZE	-0.0541	-4.51	0.000
Constant	0.2898	3.56	0.000
F Stat		7.61	
F – Sig		0.0001	
hat – Sig		0.003	
hatsq – Sig		0.000	

Source: Author's computation using STATA version 11 software, 2023

The results in Table 7 reveal that audit tenure has a beta coefficient of -0.0031. This denotes that a unit change in audit tenure results in approximately 0.0031 percent change in the effective tax rate. This shows that a unit increase in audit tenure will lead to an approximately 0.012 percent reduction in effective tax rates of financial service firms in Nigeria. But this effect is not statistically significant at all because of the probability value of (0.527) which is higher than 5%.

Similarly, Table 7 shows that the beta coefficient of the quantum of investment in PPE is 0.0472. This means that a unit change in investment in PPE leads to a 0.0472 percent change in the effective tax rate of financial service firms in Nigeria. The positive value also signifies that a unit increase in investment in PPE would result in a 0.0472 percent increase in effective tax implying that tax avoidance decreases with an increase in investment in PPE. The results in Table 4.6 also display that investment in PPE has a t value of 4.21 which is statistically significant at one percent ($p=0.000$). This implies that the amount invested in PPE significantly decreases the tax avoidance of financial service firms in Nigeria.

The cumulative results in Table 7 show an F statistic value of 7.61 with a probability value of (0.0001). This indicates that the F statistic is significant at 1% and implies that the model of the study is fit. In addition, the significant values of both hat and $hatsq$ (0.003 and 0.000) also confirm that there was no specification error in the model of the study.

4.7 Hypotheses testing and Discussion of findings

The findings of our study displayed in Table 7 show that audit tenure has an insignificant negative effect on the effective tax rate. The findings of this study, therefore, indicate that audit tenure does not have a significant impact on the tax avoidance of listed financial service firms in Nigeria. Hence, the finding provides us with evidence not to reject the null hypothesis 1 of this study. This result is not in line with the research by Lee and Kao (2018), Lestari & Nedya (2019), Brooks & Sun (2020), and Chyz et al. (2021) where audit tenure had a significant positive effect on corporate tax avoidance. But the result

supports the findings generated by Tarmidi et al. (2020), Rizqia and Lastiati (2021), Monika and Noviari (2021), Rivero-Blanco and Fernández-Rodríguez (2021) and Zain et al. (2022) who reported that audit tenure had no significant effect on tax avoidance. Indeed, this insignificant result is supported by several earlier investigations.

Concerning investment in PPE, Table 7 revealed that the amount of investment in PPE has a significant positive effect on the effective tax rate at a 1% level of significance. This point out that the more financial firms in Nigeria invest in PPE, the higher their effective tax rates. This high effective tax rate implies a decrease in tax avoidance. The above finding is not in line with the null hypothesis 2 of the study which states that investment in PPE has no significant impact on tax avoidance of listed financial service firms in Nigeria. It, therefore, follows that amount of investment in PPE plays a vital role in affecting tax avoidance of the financial service firms in Nigeria. The finding of this study contradicts the results obtained by Lee and Kao (2018), and Pratiwi et al. (2019) establishing that investment in PPE increases tax avoidance. The findings also contradict the study of Nwonyuku (2019) which documented that capital allowance and tax compliance, prosperity, and growth in the economy in Nigeria have a strong and positive relationship. This finding does not agree with Hoffman's tax planning theory (Hoffman, 1961) which assumes that the tax liabilities of firms depend on taxable profits instead of accounting profits. The impression is therefore to strengthen activities that decrease taxable profits for more accounting profit. The theory further assumes that Tax planning events are required to the point that they decrease taxable income significantly, without forfeiting accounting income.

5. Conclusions and Recommendations

This study aims at providing empirical evidence on the effect of audit tenure and investment in PPE on corporate tax avoidance practices among financial service firms in Nigeria. The study used the effective tax rate as a proxy for corporate tax avoidance. From the analysis made, it is concluded that while audit tenure does not lead to tax avoidance, investment in PPE results to lower corporate tax avoidance.

In line with the above conclusion, the study recommends that the provision of Finance Act 2023 (signed into law on 28 May 2023 by former President Muhammadu Buhari) deleting Section 32 of the CITA, which provides for reconstruction investment allowance on qualifying plants and equipment should be revisited by the present national assembly. This will go a long way in boosting local production and exportation by indigenous firms

This finding has important implications for auditors and regulators. For auditors, they may consider the impact

of tax avoidance and pay more attention to enterprises that have a high degree of tax avoidance to identify the audit risks. For regulators, to improve the quality of transactions, restrain adverse selection behavior, and achieve more efficient market supervision, it is imperative to reveal effective information on tax avoidance. The research further suggested that future research can be conducted on other corporate investment variables such as investment in bonds, securities, and treasury bills to know their effect on tax avoidance practices in Nigeria.

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