

Effect of Audit Market Concentration on Pricing and Audit Quality. Evidence from an Emerging Economy

Sunday OTUYA

Edwin Clark University, Kiagbodo, Delta State, Nigeria

Abstract

The study investigated the effect of audit market concentration on pricing and audit quality in Nigeria. This study is expected to provide theoretical and empirical implications for audit practitioners and corporate managers as well as provide policy framework for future research, not only in an emerging economy like Nigeria but for globalized viewpoint. Anchored on the structure-conduct-performance theory, the study adopted the quantitative research design. The study's population was made up of all listed manufacturing firms in Nigeria and used secondary data from annual reports of the surveyed companies for the period 2012 to 2022. Some diagnostics, descriptive and correlation statistics were conducted to examine the behaviour of the data set, while regressions were used to test the hypotheses formulated for the study. Findings of the study showed that audit market concentration increases audit quality and audit fees. The study also found that the positive effect of audit market concentration on audit quality and audit pricing is induced by audit client complexities. The study recommends amongst others that non-Big Four audit firms in Nigeria and other economies should brace up to changes in information and communication technology, and human capital development initiatives to be able to survive in the competitive market for audit services globally.

Keywords: audit services, audit market concentration, audit quality, audit pricing, audit client complexity

JEL classification: L11, M4, M41, M42

To cite this article: Sunday Otuya, *Effect of Audit Market Concentration on Pricing and Audit Quality. Evidence from an Emerging Economy*, *CECCAR Business Review*, N° 5/2024, pp. 71-80, <http://dx.doi.org/10.37945/cbr.2024.05.07>

1. Introduction

The dominance of the large, global accounting firms and the concentration of the market for audit services has long been a focus of concern by regulatory interests and academic research. The Big Four audit companies, namely PricewaterhouseCoopers, Deloitte, Ernst & Young, and KPMG, have gained ground in the market for audit services, exacerbating the threat of eliminating smaller local audit firms. According to [Audit Analytics \(2020\)](#), the Big Four now have an oligopoly in 13 EU Member States. A recent data from the European market also reported that the big international audit firms account for nearly 70% of the overall European market for services delivered to public interest organisations ([Audit Analytics, 2020](#)). A report for the United Kingdom also showed that only the Big Four audit firms for the past seven years conducted audits of the 100 largest companies listed on the London Stock Exchange.

In Nigeria, only four of the NGX 30 Index – the thirty biggest firms listed on the Nigerian Exchange Group (NGX Group) – engaged the services of audit firms outside the big international audit firms leading to the Big Four having a market share of 87 per cent of the NGX 30 ([Nairalytics, 2022](#)). Audit services for Nigeria’s banking industry is also skewed heavily in favour of the Big Four with ninety-seven per cent of banks being audited by the international auditing firms, according to [Ayoola et al. \(2019\)](#).

This development has exacerbated concerns ranging from inhibition of competitiveness to market systemic risk, perceived lower audit quality, reduced efficiency, and probable monopolistic pricing of audit services. [Šindelář \(2022\)](#) contend further that audit market concentration poses the potential challenges of an uncompetitive pricing and a monopolistic situation, both of which are aggravated by the lack of choice. [Brockbank et al. \(2023\)](#) argued that increasing supplier concentration makes it possible for the market power of large audit firms to continue to grow leading to cartelization. According to [Willekens et al. \(2023\)](#), cartelization would allow the Big Four audit firms to control the market collectively and set prices amongst or between each other. Audit marketplaces may become oligopolistic or monopolistic because of this concentration, which may lead to lower audit quality.

Two major justifications drive this investigation. First, research has produced contradictory results regarding the effects of audit market concentration on audit quality, apart from the pricing concerns associated with audit market concentration. Studies ([Huang et al., 2016](#); [Brockbank et al., 2023](#); [Willekens et al., 2023](#)) have demonstrated a favourable correlation exists between audit quality and audit market concentration, which is consistent with the position of the [Government Accountability Office \(2008\)](#) reports which declared that heightened concentration does not equate to a lower standard of auditing. However, other research ([Boone et al., 2012](#)) has shown that there is an inverse link between concentration and audit quality.

Second, the extent to which audit client characteristics like size and complexity could influence the link between audit market concentration, pricing, and overall audit quality has not been considered in the existing research, particularly in the context of the market for audit services in Nigeria. Further academic study on the relationship between audit market concentration, pricing, and quality in the Nigerian context is required, as evidenced by an analysis of the moderating influence of audit client complexities and by the contradictory evidence in the academic literature.

Following is the arrangement of the remaining sections of the paper: Review of relevant literature and creation of hypotheses are covered in part two. The empirical approach used for the study is described in full in section three, along with the design and data, model specifications, theoretical background, and variable measurement. While the final portion wraps up the investigation, section four provides the data analysis and findings discussion.

2. Literature review and hypotheses development

2.1. Audit quality

Audit quality is a complicated and multifaceted term that includes the essential components that maximise the possibility that quality audits are carried out consistently. An audit team’s engagement is said to have been successful and of good quality if they displayed the right beliefs, ethics, and attitudes in conducting the assigned tasks and reporting the true outcome of such tasks ([Otuya, 2019](#)). It is used to describe the level of excellence with which audits are completed. [Barghathi et al. \(2020\)](#) describe audit quality as the result of audits that are conducted consistently, in accordance with the demands and purposes of relevant professional standards, and within a robust quality control system. According to [Enofe et al. \(2013\)](#), the accuracy of the accounting data and the effectiveness of the clients’ systems are related to the quality of the audit. It is a crucial component of the ISO 9001 quality system standard and a crucial feature of any organization’s quality management system.

The input-based and the output-based measures are the commonly used proxies for measuring audit quality. Observable inputs to the audit process are used by the input-based metrics to assess the quality of the audit. Input such as man hours, audit reporting lag, audit staff experience and number of transactions, branches,

segments reviewed constitute this measure ([Kallapur et al., 2010](#)). However, because they do not identify auditor misbehaviour, they are relatively noisy audit quality measures, and inputs may not directly translate to outputs. On the other hand, the output-based measures are determined by the actual rate of audit quality achieved. This measure infers audit quality by giving consideration to the output of the audit process. Output based indicators include qualified audit reports, financial statement restatements, earnings management, and income accrual methodologies ([DeFond & Zhang, 2014](#); [Otuya & Emiaso, 2022](#)).

2.2. Audit pricing

Audit pricing refers to the cost of conducting an audit and is usually the conclusion of the auditor-client negotiations ([Hackenbrack et al., 2014](#)). The fees for an audit can vary depending on several factors, such as the size and complexity of the organization, the scope of the audit, the specific requirements of the engagement, audit market competition in the environment and risk involved. In a survey conducted in 2022 on audit fees, the International Federation of Accountants provided insights into the cost of audits as a percentage of corporate revenue and reported that international audit firms received a higher proportion of audit fees compared to national or local auditing firms ([IFAC, 2022](#)). According to [Widmann et al. \(2021\)](#), an audit-client determines its willingness to pay by weighing the benefits and demerits of a financial statement audit. Likewise, the price demanded for the supply of audit services is determined by the auditor after taking other market factors, costs, and risks into account. According to [Simunic \(1980\)](#), the cost of financial statement audit services is determined by the potential risks (financial risks from litigation and indirect reputational risks) as well as the required workload (the audit effort measured in audit hours, the size of the team, and the use of experienced auditors and specialists).

2.3. Audit market concentration

Market concentration is a measurement of the number of companies and their market shares in a certain market. It indicates the extent of domination of sales or production by a few firms and is often used as an indicator of the level of competition and the potential for market power in an industry ([Delbono & Lambertini, 2022](#)). The market share held by audit companies is known as audit market concentration. When a few numbers of audit firms dominate and hold a sizable amount of the audit market share or sales volume, the audit market is said to be highly concentrated. [Brockbank et al. \(2023\)](#) defined audit market concentration as the degree of dominance of a few large audit firms in the market. According to [Porter \(2020\)](#), if a client is given a larger added benefit, market concentration can be seen as a strategic competitive advantage of a company. The selection of any audit firm is made based on the audit services they have provided in the past and their reputation. Globally, the Big Four audit firms are pushing out smaller and medium-sized audit firms from the audit of capital market-oriented organisations. As a result, the Big Four audit companies experience enormous competition disadvantages and escalating oligopolistic rents ([Ayoola et al. 2019](#); [Brockbank et al., 2023](#); [Šindelář, 2022](#)). There are different ways to measure market concentration, but one of the most common is the Herfindahl-Hirschman Index (HHI), which is calculated by adding the squares of the market shares of each firm in the market. The higher the HHI, the more concentrated the market is, and the lower the HHI, the more competitive the market is.

2.4. Audit client complexity

Client complexity is a term used in auditing to describe the level of difficulty involved in auditing a client's financial statements. According to [Morais \(2020\)](#), audit client complexity is a measure of the client's size, organizational structure, and the complexity of its operations. The more complex a client's operations are, the more difficult it is to audit its financial statements.

Complexity is a concoction of several elements that are connected to one another and frequently unique to a business or sector. The scale and concentration of enterprises and operations across legal entities were highlighted by [Cetorelli and Goldberg \(2014\)](#) through the usage of complexity. [Carmassi and Herring \(2016\)](#) also examined complexity in terms of geographic presence, which distinguishes between business entities'

domestic and foreign locations by using data on their distribution among nations. Complexity has been measured in prior studies using multiple concepts such as business models, branch network within conglomerates, number of legal entities, balance sheet structure, notional value of assets, trading assets, operational branches, and segments ([Ayoola et al., 2019](#); [Morais, 2020](#); [Otuya & Osiegbu, 2020](#)).

2.5. Audit market concentration, audit quality, and audit client complexity

Empirical results around prior research about the relationship between audit quality and audit market concentration are frequently completely at odds with one another. Using data from the United States from 2009 to 2017, [Willekens et al. \(2023\)](#) investigated the effect of market concentration on audit quality and found no relationship between audit quality and market concentration. [Van Raak et al. \(2020\)](#) explored whether the concentrated structure of the audit market has an influence on audit quality and found that audit market concentration has an adverse effect on quality in the SME-client sector. Similar to this research, [Brockbank et al. \(2023\)](#) investigated whether audit market concentration influences properties of analysts' forecasts and found overall net positive effect between audit market concentration, audit quality, and ultimately, analysts' forecasts. Against the backdrop of the forgoing, we hypothesize that audit market concentration has a positive effect on audit quality.

H1: Audit market concentration has a positive effect on audit quality of listed manufacturing firms in Nigeria.

Audit client complexity is defined by [Morais \(2020\)](#) as the degree of intricacy and diversity of a company's operations, financial reporting, and business structure. Studies on the relationship between audit market concentration and the mediating role of audit client complexity are scarce especially in the developing economies. In an investigation, [Morais \(2020\)](#) found evidence that audit quality decreases in Big Four market concentration for complex audit engagements. The findings suggest that high concentration in the audit market may have implications for both audit pricing and quality. Furthermore, [Brockbank et al. \(2023\)](#) showed that when audit markets are more concentrated, analyst projections are more precise and less distributed, but they also noted that the complexity of the client may reduce the audit's quality. According to findings by [Griffith et al. \(2015\)](#), clients' characteristics, particularly size, account for a considerable portion of the differences in audit quality proxies between Big Four and non-Big Four audits. Task complexity, according to [Griffith et al. \(2015\)](#), may also affect how well audit teams perform. Larger clients may be associated with more complex audits, which can lead to significant differences in audit quality. Following from the forgoing, we state our second hypothesis that the positive link between audit firm concentration and audit quality is debilitated by audit client complexity.

H2: The positive association between audit market concentration and audit quality is weakened by audit client complexities.

2.6. Audit market concentration, audit pricing, and audit client complexity

Extant literature provides mixed evidence on the association between audit market concentration and audit pricing. The [Government Accountability Office \(2008\)](#) initiated a study on whether audit market concentration influences audit fees and audit quality and reported that audit quality may be attributable to efficient quality service rather than market power. [Eshleman and Lawson \(2017\)](#) using a large sample of US audit clients covering 90 metropolitan statistical areas spanning 2000-2013 found that audit market concentration is associated with significantly higher audit fees. In China, [Huang et al. \(2016\)](#) used 12,334 firm-years from 2001 to 2011 to examine the impacts of audit market concentration on audit fees and quality. They discovered a strong positive association between audit market concentration and audit fees.

In a UK study, [Kittsteiner and Selvaggi \(2008\)](#) investigated whether high concentration among big auditors results in higher audit fees being paid by large corporate clients. Their findings point to a significant correlation between the degree of audit market concentration and higher audit fees paid by UK listed companies. In addition, using global data with a focus on concentration within the Big Four group of firms across nations, [Gunn et al. \(2019\)](#) explored the possible detrimental consequences of excessive audit market concentration on audit pricing

and quality. The study found that audit prices are rising for businesses where there are more entry hurdles for rival auditors, as indicated by client size, global operations, and IFRS use. In light of the foregoing, we develop a third hypothesis that claims there is a positive correlation between audit pricing and audit market concentration.

H3: Audit market concentration has a positive effect on audit pricing in listed manufacturing firms in Nigeria.

Studies on the connection between audit market concentration and audit pricing are numerous, but there are few that focus on how much audit client complexity affects this link. In a study of determinants of audit pricing, [Naser and Nuseibeh \(2007\)](#) found that the primary predictors of audit fees are corporate size, industry type, level of organisational complexity, and risk. Additionally, [Gunn et al. \(2019\)](#) discovered that audit prices are rising for clients with higher entry barriers for rival auditors, as proxied by client size, worldwide activities, and IFRS adoption. In a different study, [Gunn et al. \(2019\)](#) reported that audit client complexity increases audit fees due to greater audit tasks and higher wealth transfer from shareholders but also found that such audit produced lower-quality audits. In light of the foregoing, we formulate a fourth hypothesis that the positive relationship between audit market concentration and audit pricing is strengthened by audit client complexity.

H4: The positive relationship between audit market concentration and audit pricing is induced by audit client complexity.

3. Research methodology

3.1. Design and data

The study involves the use of numerical data to find patterns, make predictions, test causal relationships, and generalize results, hence, the quantitative research design was adopted. The population of the study consisted of 58 listed manufacturing companies on the Nigerian Exchange Group as of 31 December 2022. To allow for homogeneity of period scope and obtain a balanced panel data for the research, some firms were filtered out based on certain criteria. The criteria for eligibility include that firms must be active and possess the relevant data within the study period 2012 to 2022. Consequently, 17 companies did not meet these criteria, hence, were excluded from the study. The sample size of 41 companies for eleven years, which gave 451 observations, was used for the study.

3.2. Theoretical framework and model specifications

The structure-conduct-performance hypothesis, which Edward Chamberlin and Joan Robinson first proposed in 1933, serves as the study's theoretical foundation. According to the theory, market concentration encourages cooperation and anti-competitive behaviours, which then result in price exploitation and an oligopolistic or monopolistic market. The hypothesis goes on to claim that market concentration restricts firms' options for auditors even in the face of apparent client discontent with the auditor's services, increases the market power of auditors, and promotes complacency, all of which may lead to cartel pricing and increased audit fees ([Huang et al., 2016](#)). The major argument in the structure-conduct-performance theory is that firms in concentrated market charge higher fee due to monopoly market and not because of any efficient services rendered.

Based on the theoretical underpinning, the study adopted two separate econometric models for capturing and testing for the relationship between audit concentration and audit quality on one part, and audit concentration and audit pricing on the other.

The models are expressed as:

$$AUQL_{it} = f(ACON) \quad (i)$$

$$APRC_{it} = f(ACON) \quad (ii)$$

Thus, from linear equations ((i) and (ii)), we obtain:

$$AUQL_{it} = \beta_0 + \beta_1 ACON_{it} + e_t \quad (iii)$$

$$APRC_{it} = \beta_0 + \beta_1 ACON_{it} + e_t \quad (iv)$$

Introducing the mediating variable into equations ((iii) and (iv)), we obtain:

$$AUQL_{it} = \beta_0 + (\beta_1 ACON_{it} \times COMX_{it}) + e_t \quad (v)$$

$$APRC_{it} = \beta_0 + (\beta_1 ACON_{it} \times COMX_{it}) + e_t \quad (vi)$$

Where: AUQL = Audit quality; APRC = Audit pricing; ACON = Audit concentration; COMX = Audit client complexity; i = Manufacturing firms; t = The time dimension; β_0 = Intercept; β_1 - β_2 = Parameter to be estimated, and e = Stochastic or Disturbance term.

3.3. Measurement of variables

Table 1. Operationalization of the variables

Variables	Acronym	Measurement	Source	A priori expectation
Audit quality	AUQL	Audit quality is measured using accruals for the period. It is derived as cash flow from operating activities minus profit after tax divided by total assets. A negative accrual ratio indicates that cash earnings are lower, which may not be desirable.	Datta <i>et al.</i> (2017) Willekens <i>et al.</i> (2023)	-
Audit pricing	APRC	This is the logarithm of the total fee paid for statutory audit.	Van Raak <i>et al.</i> (2020)	+
Audit market concentration	ACON	Audit market concentration is proxied by Herfindahl-Hirschman Index. It is calculated as a sum of the squared value of the market share of each audit firm against the overall market.	Ayoola <i>et al.</i> (2019) Godawska and Kutera (2021)	+
Audit client complexity	COMX	This is a complexity variable measured as the logarithm of the number of audit client's business segments.	Morais (2020) Eshleman and Lawson (2017)	+

Source: Researcher's compilation.

4. Estimation results and discussion of findings

Results from the quantitative data analysis form the basis of discussion, conclusion and recommendations.

4.1. Diagnostics tests

Diagnostic tests were conducted to ensure the model fits the data. The study checked for multicollinearity, heteroskedasticity, autocorrelation, and Huasman tests. Table 2 presents the results of the diagnostics tests.

Table 2. Model diagnostics tests

	VIF test	
	Collinearity Tolerance	Statistics VIF
AUQL	0.488	4.269
APRC	0.334	3.276
ACON	0.127	4.854
COMX	0.141	2.111
Model diagnostics		
Breusch-Pagan-Godfrey test	1,215 (0.211)	
First order serial autocorrelation (DW)	1.854	
Hausman test	$\chi^2 = 3.16, df = 3, p = 0.431$	

To detect multicollinearity, the variance inflation factor (VIF), which measures the correlation and strength of correlation between the predictor variables in a regression model, was deployed.

However, as observed from Table 2, none of the variables has VIF values greater than 10, hence, none gave a serious indication of multicollinearity. The study further employed the Breusch-Pagan-Godfrey test to ascertain the presence or absence of heteroscedasticity in the regression result. Breusch-Pagan-Godfrey test showed $X^2 = 1,215$, $p\text{-value} = 0.211$, which implies the absence of heteroscedasticity.

The Durbin-Watson test, which measures the linear association between adjacent residuals from a regression model, was used to check for first-order serial correlation. The results from Table 2 show DW of 1.854 for the Random Effects model, which indicate absence of serial autocorrelation. To confirm that the chosen approach for model estimation was correct, the Hausman test was run. The Random Effects model was selected based on the Hausman test result of $x^2 = 3.16$, $df = 3$, $p = 0.431$.

Table 3. Descriptive statistics

	AUQL	APRC	ACON	COMX
Mean	-0.182	2.38	0.681	8.00
Maximum	0.227	13.51	0.745	13.00
Minimum	-0.323	2.29	0.109	1.00
Standard deviation	0.043	1.19	0.052	5.95
Observations	451	451	451	451

Results from the descriptive statistics shows that AUQL has a mean of -0.182 indicating that a number of the companies under investigation recorded a negative total accrual for the period. The maximum and minimum values stand at 0.227 and -0.323 respectively, with a standard deviation of 0.043. The standard deviation is low and indicates no considerable variation among the surveyed manufacturing firms in their accrual level.

Further, the descriptive statistics result from the table on the audit pricing and audit concentration point to the fact that while the sampled companies had an average of 2.38 for audit pricing for the period under consideration, the percentage of audit concentration within the same period under consideration stood at an average of about 68 percent. The maximum audit pricing was 13.51 with the lowest being 2.29. Audit concentration also recorded the maximum of 74.5 percent and minimum of 10.9 percent during the period. The standard deviation of 1.19 for audit pricing and 0.052 for audit concentration shows that there is a significant dispersion in terms of audit pricing and audit concentration for sampled companies.

Finally, the audit client complexity has a mean of eight segments. The maximum and minimum values are 13.0 and 1.0 respectively, with a standard deviation of 5.95. The standard deviation measuring the spread of the distribution is high indicating a considerable dispersion in the audit client complexity, which was proxied by operational segments among the sampled firms.

Table 4. Correlation analysis

	AUQL	APRC	ACON	COMX
AUQL	1			
APRC	0.203	1		
ACON	0.036	-0.370	1	
COMX	0.201	0.103	0.226	1

A correlation matrix was adopted to check the level of correlation among the dependent, independent, and moderating variables. As observed in Table 4, the correlation statistics shows that AUQL has a positive relationship with APRC ($r = 0.203$), ACON ($r = 0.036$), and COMX ($r = 0.201$). The correlation also shows that APRC has a positive relationship with COMX ($r = 0.103$) but a negative relationship with ACON ($r = -0.370$). Finally, ACON is observed to have a positive correlation with COMX ($r = 0.226$).

4.2. Regression analysis

The hypotheses testing results of the panel data estimation are reported in Table 5.

Table 5. Hypotheses testing results

Description	e	p	Decision
H1: Audit quality and audit concentration $AUQL_{it} = \beta_0 + \beta_1 ACON_{it}$	0.489	0.000	Accepted
H2: Audit quality, audit concentration, and audit client complexity $AUQL_{it} = \beta_0 + (\beta_1 ACON_{it} \times COMX_{it})$	0.131	0.095	Rejected
H3: Audit pricing and audit concentration $APRC_{it} = \beta_0 + \beta_1 ACON_{it}$	0.679	0.023	Accepted
H4: Audit pricing, audit concentration, and audit client complexity $APRC_{it} = \beta_0 + (\beta_1 ACON_{it} \times COMX_{it})$	0.047	0.000	Accepted

e = coefficient; p = probability at 0.05 significant level

Results are discussed thus:

First, audit market concentration is found to have a positive and significant effect on audit quality ($\beta_1 AUQL_{it} = 0.489, p = 0.000$). The result meets our a priori expectation and is consistent with prior studies such as [Brockbank et al. \(2023\)](#), [Che et al. \(2018\)](#), and [Willekens et al. \(2023\)](#) that found no effect of audit market concentration on audit quality. The result does not also agree with [van Raak et al. \(2020\)](#), that reported a negative effect of audit market concentration on audit quality. As regards the mediating role of audit client complexity on the positive effect of audit market concentration on audit quality, the coefficient of the variable ($\beta_1 ACON_{it} \times COMX_{it}$) is observed to be positive but not significant ($\beta_1 ACON_{it} \times COMX_{it} = 0.131, p = 0.095$). This implies that audit client complexity does not weaken the positive effect of audit market concentration on audit quality. The result did not meet our a priori expectation. Studies on the mediating role of audit client complexities are scarce. Nevertheless, in separate studies, [Morais \(2020\)](#) and [Brockbank et al. \(2023\)](#) reported that audit client complexities have a positive effect on audit quality.

In addition, the coefficient of audit pricing is observed to be positive and significant ($\beta_1 APRC_{it} = 0.679, p = 0.023$). The implication is that the amount of audit fees charged is significantly influenced by audit market concentration. The result meets our a priori expectation and is also consistent with previous studies such as [Eshleman and Lawson \(2017\)](#), [Huang et al. \(2016\)](#), and [Gunn et al. \(2019\)](#) that found a positive association between audit market concentration and audit fees. As regards the moderating effect of audit client complexity on the relationship between audit market concentration and audit pricing, the regression result showed a positive effect and is statistically significant at 5% ($\beta_1 ACON_{it} \times COMX_{it} = 0.047, p = 0.000$). The result gives enough evidence to accept the hypothesis that audit client complexity induces the positive effect of audit market concentration on audit pricing. The result meets our a priori expectation. In a prior study, [Gunn et al. \(2019\)](#) highlighted that market complexity affects audit pricing.

5. Conclusion and recommendations

The study investigated the effect of audit market concentration on audit quality in Nigeria. The study used secondary data from annual reports of listed manufacturing companies for the period 2012 to 2022. Some diagnostics, descriptive, and correlation statistics were conducted to examine the behaviour of the data set, while regressions were used to test the relationship between the variables highlighted in the study. Findings of the research indicate that audit market concentration increases audit quality and audit fees. The study also found that the positive effect of audit market concentration on audit quality and audit pricing is induced by audit

client complexity and therefore concludes that audit quality and audit pricing are influenced by audit market concentration in Nigeria. The study recommends against this backdrop that non-Big Four audit firms in developing and advanced economies should intensify investment in human capital by bracing up to changes in information and communication technology, audit staff training, and development initiatives to be able to break into the Big Four market share. Finally, regulatory institutions should encourage mandatory audit rotation and joint audits as a way of integrating national audit firms into the highly competitive and concentrated audit market globally.

References

1. Ayoola, T.J., Oyerinde, A.A., Inneh, G.E. (2019), *Audit Market Concentration and Audit Fees: Empirical Evidence from Nigerian Deposit Money Banks*, IJAM, Vol. 3, No. 2, pp. 91-106, https://www.researchgate.net/publication/346927564_AUDIT_MARKET_CONCENTRATION_AND_AUDIT_FEES_EMPIRICAL_EVIDENCE_FROM_NIGERIAN_DEPOSIT_MONEY_BANKS.
2. Barghathi, Y., Ndiweni, E., Lasyoud, A.A. (2020), *Joint Audit, Audit Market Concentration, and Audit Quality: Perceptions of Stakeholders in the UAE*, Corporate Ownership & Control, Vol. 17, No. 2, pp. 32-45, <https://doi.org/10.22495/cocv17i2art3>.
3. Boone, J.P., Khurana, I.K., Raman, K.K. (2012), *Audit Market Concentration and Auditor Tolerance for Earnings Management*, Contemporary Accounting Research, Vol. 29, No. 4, pp. 1171-1203, <https://doi.org/10.1111/j.1911-3846.2011.01144.x>.
4. Brockbank, B.G., Do, C., Lawson, B.P. (2023), *Audit Market Concentration and Audit Quality: Evidence from Analysts' Forecasts*, Accounting Horizons, Vol. 37, No. 3, pp. 59-77, <https://doi.org/10.2308/HORIZONS-19-192>.
5. Carmassi, J., Herring, R. (2016), *The Corporate Complexity of Global Systemically Important Banks*, Journal of Financial Services Research, Vol. 49, pp. 175-201, <https://doi.org/10.1007/s10693-016-0251-4>.
6. Cetorelli, N., Goldberg, L.A. (2014), *Measures of Global Bank Complexity*, Economic Policy Review, Vol. 20, No. 2, pp. 107-126.
7. Che, L., Langli, J.C., Svanström, T. (2018), *Education, Experience, and Audit Efforts*, Auditing: A Journal of Practice and Theory, Vol. 37, No. 4, pp. 91-115, <https://doi.org/10.2308/ajpt-51896>.
8. Datta, S., Iskandar-Datta, M., Singh, V. (2017), *The Impact of Idiosyncratic Risk on Accrual Management*, International Journal of Managerial Finance, Vol. 13, No. 1, pp. 70-90, <http://dx.doi.org/10.1108/IJMF-01-2016-0013>.
9. DeFond, M.L., Zhang, J. (2014), *A Review of Archival Auditing Research*, Journal of Accounting and Economics, Vol. 58, No. 2-3, pp. 275-326, <https://doi.org/10.1016/j.jacceco.2014.09.002>.
10. Delbono, F., Lambertini, L. (2022), *Innovation and Product Market Concentration. Schumpeter Arrow, and the Inverted U-Shape Curve*, Oxford Economic Papers, Vol. 74, No. 1, pp. 297-311, <https://doi.org/10.1093/oep/gpaa044>.
11. Enofe, A., Mgbame, C., Otuya, S., Ovie, C. (2013), *Audit Report and Going Concern Assumption in the Face of Corporate Scandals in Nigeria*, Research Journal of Finance and Accounting, Vol. 4, No. 13, pp. 149-155.
12. Eshleman, J.D., Lawson, B.P. (2017), *Audit Market Structure and Audit Pricing*, Accounting Horizons, Vol. 31, No. 1, pp. 57-81, <https://doi.org/10.2308/acch-51603>.
13. Godawska, J., Kutera, M. (2021), *Changes in the Concentration of the Audit Services Market in the Context of Mandatory Auditor Rotation in Poland and the United Kingdom*, European Research Studies Journal, Vol. 24, No. 3B, pp. 372-385, <https://doi.org/10.35808/ersj/2471>.
14. Griffith, E.E., Hammersley, J.S., Kadous, K., Young, D. (2015), *Auditor Mindsets and Audits of Complex Estimates*, Journal of Accounting Research, Vol. 53, No. 1, pp. 49-77, <https://doi.org/10.2139/ssrn.2474365>.
15. Gunn, J.L., Kawada, B., Michas, P.N. (2019), *Audit Market Concentration, Audit Fees, and Audit Quality: A Cross-Country Analysis of Complex Audit Clients*, Journal of Accounting and Public Policy, Vol. 38, No. 6, pp. 201-220, <https://doi.org/10.1016/j.jaccpubpol.2019.106693>.
16. Hackenbrack, K.E., Jenkins, N.T., Pevzner, M. (2014), *Relevant but Delayed Information in Negotiated Audit Fees*, Auditing: A Journal of Practice & Theory, Vol. 33, No. 4, pp. 95-117, <http://dx.doi.org/10.2139/ssrn.1668983>.

17. Huang, T.-C., Chang, H., Chiou, J.-R. (2016), *Audit Market Concentration, Audit Fees and Audit Quality: Evidence from China*, *Auditing: A Journal of Practice and Theory*, Vol. 35, No. 2, pp. 121-145, <https://doi.org/10.2308/ajpt-51299>.
18. Kallapur, S., Sankaraguruswamy, S., Zang, Y. (2010), *Audit Market Concentration and Audit Quality*, <http://dx.doi.org/10.2139/ssrn.1546356>.
19. Kittsteiner, T., Selvaggi, M. (2008), *Concentration, Auditor Switching and Fees in the UK Audit Market*, Else Research Report, https://assets.publishing.service.gov.uk/media/5329db73ed915d0e5d000073/bdo_further_submission_lse_report.pdf.
20. Morais, D. (2020), *The Effect of Client Complexity on Audit Quality*, *Catolica Lisbon Business & Economics*, https://repositorio.ucp.pt/bitstream/10400.14/31268/1/152416024_Diogo%20Morais_DPDA.pdf.
21. Naser, K., Nuseibeh, R. (2007), *Determinants of Audit Fees: Empirical Evidence from an Emerging Economy*, *International Journal of Commerce and Management*, Vol. 17, No. 3, pp. 239-254, <http://dx.doi.org/10.1108/10569210710833635>.
22. Otuya, S. (2019), *Auditors' Independence and Quality of Financial Reporting in Listed Nigerian Manufacturing Companies*, *International Journal of Accounting & Finance (IJAF)*, Vol. 8, No. 1, pp. 111-128.
23. Otuya, S., Emiaso, D. (2022), *Accounting Restatements, Multiple Directorships and Related Party Transactions*, *European Journal of Accounting, Auditing and Finance Research*, Vol. 10, No. 2, pp. 52-63.
24. Otuya, S., Osiegbu, P. (2020), *Shareholders' Wealth and Enterprise Risk Management: A Study of Deposit Money Banks in Nigeria*, *The Nigerian Accountant*, Vol. 51, No. 8, pp. 7-13.
25. Porter, C.M. (2020), *Bank Audit Fee Pressure During the Financial Crisis*, *Current Issues in Auditing*, Vol. 14, No. 1, pp. A31-A45, <https://doi.org/10.2308/ciia-52643>.
26. Simunic, D.A. (1980), *The Pricing of Audit Services: Theory and Evidence*, *Journal of Accounting Research*, Vol. 18, No. 1, pp. 161-190, <https://doi.org/10.2307/2490397>.
27. Šindelář, M. (2022), *The Analysis of Audit Market Concentration in Visegrad 4 Countries*, in Bilgin, M.H., Danis, H., Demir, E. (Editors), *Eurasian Business and Economics Perspectives*, *Eurasian Studies in Business and Economics*, Vol 24, Springer, Cham, https://doi.org/10.1007/978-3-031-15531-4_12.
28. Van Raak, J., Peek, E., Meuwissen, R., Schelleman, C. (2020), *The Effect of Audit Market Structure on Audit Quality and Audit Pricing in the Private-Client Market*, *Journal of Business Finance & Accounting*, Vol. 47, No. 3-4, pp. 456-488, <https://doi.org/10.1111/jbfa.12414>.
29. Widmann, M., Follert, F., Wolz, M. (2021), *On the Political Decision of Audit Market Regulation: Empirical Evidence of Audit Firm Tenure and Maximum Durations Within the European Union*, *Economies*, Vol. 9, No. 2, <https://doi.org/10.3390/economies9020079>.
30. Willekens, M., Dekeyser, S., Bruynseels, L., Numan, W. (2023), *Auditor Market Power and Audit Quality Revisited: Effects of Market Concentration, Market Share Distance, and Leadership*, *Journal of Accounting, Auditing & Finance*, Vol. 38, No. 1, pp. 161-181, <https://doi.org/10.1177/0148558X20966249>.
31. Audit Analytics (2020), *Monitoring the Audit Market in Europe*, https://www.auditanalytics.com/doc/Monitoring_the_Audit_Market_in_Europe.pdf.
32. European Commission (2021), *Report from the Commission to the European Parliament, the Council, the European Central Bank and the European Systemic Risk Board on Developments in the EU Market for Statutory Audit Services to Public-Interest Entities Pursuant to Article 27 of Regulation (EU) No. 537/2014, COM(2021) 29 final*, Brussels, <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52021DC0029>.
33. Financial Reporting Council (2022), *Developments in Audit*, London.
34. Government Accountability Office (2008), *Audits of Public Companies: Continued Concentration in Audit Market for Large Public Companies Does Not Call for Immediate Action, Report to Congressional Addressees*, GAO Report 08-163, Government Printing Office, Washington, DC, <https://purl.fdlp.gov/GPO/LPS90828>.
35. IFAC (2022), *Audit Fees Survey*, <https://www.ifac.org/knowledge-gateway/audit-assurance/publications/audit-fees-survey-2022>.
36. KPMG (2019), *Statutory Audit Services Market Study Update Paper*, https://assets.publishing.service.gov.uk/media/5c5aff53e5274a3158cea9ee/KPMG_response_to_update_paper.pdf.
37. Nairalytics (2022), *Nigeria's Audit Market Statistics*, www.nairalytics.com.