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DETERMINANTS OF AUDITORS INDEPENDENCE: EVIDENCE FROM LISTED DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

The recent cases of bank failures witnessed in Nigeria despite unqualified audit reports have raised questions about banks auditor's independence. Given the significance of auditor's independence in enhancing corporate financial reporting quality, this paper examined the determinants of auditor's independence of 13 listed deposit money banks in Nigeria from 2006 to 2018. The paper specifically determined the combined influence of audit firm size, auditor's rotation and non-audit services on auditor's independence. The study data were generated from the annual accounts and reports of the 13 sampled banks and audit firms during the period. The paper utilized descriptive statistics and ordinary least square regression analysis to analyse the data and test the hypotheses after diagnostic tests were conducted. The results revealed that audit firm size and auditor rotation are determinants of auditor's independence while non-audit services do not. Based on the findings, it was recommended, among others, that professional accountancy bodies should strengthen legislation through the imposition of stricter penalties and monitoring to ensure that auditors maintain independence while performing the statutory audit function.

Keywords: Auditor's Independence, Audit Firm Size, Auditor Rotation, Non-Audit Services, Audit Quality, Financial Reporting Quality

1. Introduction

The role of auditor's independence in ensuring high audit quality and by extension high financial reporting quality of corporations is widely acknowledged in the accounting literature (Akpom and Dimkpah, 2013; Herath and Pradies, 2018; Otuya, 2019; Shockley, 1981). Reynolds, Deis and Francis (2004) strongly argued that the role of auditors as professionals in modern corporations and the society in general rests on the degree of independence upheld by the auditors when auditing.

Auditors independence is the aptitude or capacity of an auditor to conduct audit freely and in ways that is not influenced by irrational decisions or prejudices (Aamir and Farooq, 2011). It is the impartial mental attitude of an auditor in making decisions in the course of the audit exercise and reporting on audit findings. It is a statutory and professional requirement that auditors maintain high degree of independence in the course of carrying out their audit assignment. For instance, the Companies and Allied Matters Act (CAMA) 2020 in Nigeria to ensure auditor

independence, clearly outlines persons that are not qualified to serve or render audit services to companies in section 403. The independence requirement is designed to ensure that auditors provide high quality audit. It is needless stating that when financial statements users have cause to believe that auditor independence is compromised, their trust in the auditor's report wanes. This also makes them less reliant on the information disclosed in the financial statements (Olagunju, 2011).

Why the importance of auditor's independence to the quality of the work outcome (audit report) and in preventing economic crisis is not in doubt, a question of research interest is that of: what factors influence auditors independence? The accounting literature suggests that auditor's independence can be impaired by certain factors. These factors constitute what is regarded as determinants of auditor's independence. There are several factors that weaken the independence of auditors. Akpom and Dimkpah (2013) identified some of these factors to include; audit firm's tenure (audit firm rotation), provision of non-audit services by the auditor and audit firm's size. Others include size of the audit fees relative to either the client's assets or branches or locations, staff strength, level of competition in the audit services market, audit committee, and auditor-client relationship (Al-Khoury, Ali, Al-Sharif, Hanania, Al-Malki, and Jallad 2015; Herath and Pradies, 2018; Kammenga, 2016).

Though there are several determinants of auditor's independence as highlighted in the foregoing paragraph, this paper was focused on the three determinants of audit firm size, auditor rotation and non-audit services. These three determinants were considered more relevant because they are not only the dominant themes in the literature on auditor's independence but very few studies were done combining these variables in relation to auditor's independence in Nigeria. Furthermore, the greater emphasis on auditor independence in the wake of increasing corporate scandals requires that more studies into its determinants in emerging economies like Nigeria are conducted to guide the development of the right regulatory framework by policy makers.

Specifically, the motivation of this paper stems from the indictments of auditors following corporate scandals around the world and particularly in the Nigerian banking industry (Akpom and Dimkpah, 2013). For example, Arthur Andersen was implicated in the collapse of Enron in 2001 in the United States (US). Also, Akintola Williams & Deloitte was indicted in Afribank Plc and Cadbury Nigeria Plc scandals in Nigeria in 2006 (Olatunde and Lauwo, 2010; Salaudeen, Ibikunle and Chima, 2015). These accounting firms were big and reputable auditors in the US and Nigeria environments respectively. There are cases of Deposit Money Banks (DMBs) in Nigeria carrying in perpetuity non-performing loans (that may never be recovered) which should have been written off the books (Olowookere and Oladejo, 2014). In fact, recently there are increased cases of bank failures in Nigeria despite unqualified reports by auditors in the industry. These and other anomalies point to the problem of external audit functions in the industry.

The general position in the accounting literature is that in the absence of auditor's independence, the credibility, reliability and integrity of corporate financial statements is threatened (Herath and Pradies, 2018; Okezie and Egeolu, 2019) with daring consequences to investors and other users of financial statements. In fact, concern about auditor's independence is a core theme in the current arguments on corporate governance in Nigeria and elsewhere. Therefore, examining the determinants of auditor's independence is important and timely towards an understanding of how it might have been and is still responsible for the prevailing poor reporting quality in the Nigerian banking industry.

This paper is particularly of significance to shareholders as it serves to guide decision regarding the type (in terms of size) of audit firm to appoint as statutory auditor that guarantees the production of high quality financial reports. Also, the paper provides useful insights for the regulation of external auditors in Nigeria by the professional accountancy bodies and Financial Reporting Council of Nigeria (FRCN) to ensure the independence of auditors especially in the areas of auditor tenure and provision of non-audit services.

The paper is structured into five major parts. Following this introduction is literature review, the next part is methodology and is followed by results and discussion, and conclusion and recommendations respectively.

2. Literature Review

Auditors independence has been defined variously in the accounting and particularly audit literature. However, these views reveals auditor's independence as the freedom of the auditor from the influence of interested parties and the ability to exercise independent judgment in the course of audit work (see Abubakar and Ahmad, 2009; Suseno, 2013; Okolie, 2014). In other words, auditor's independence is the freedom of the auditor from parties having interest in the client being audited. It is a mental disposition that makes it possible for the auditor to make decisions without prejudice during the conduct of an audit. It is about the auditor's ability to examine the books of accounts and report his findings honestly and impartially. Simply put, it is the absence of interests that creates material bias that compromises the reliability of financial statements audited.

There are two perspectives to auditor's independence; independence in mind and in appearance (Al-Khoury, Ali, Al-Sharif, Hanania, Al-Malki, and Jallad, 2015). Lindberg and Beck (2004) stated that independence in mind also known as "independence in fact" is the ability of an auditor to make independent audit decisions even when auditing in a potentially compromising condition. Olagunju (2011) argued that an auditor does not only have to act independently but should appear independent too. Mahdi (2009) provided evidence that both forms of auditor's independence are essential to public trust and confidence in the auditing profession.

Qawqzeh, Endut, Rashid, Johari, Hamid and Rasit (2018) documented that the essence of auditor's independence is to avoid the scenario that would reduce the objectivity or allow partiality to influence judgment. Where the auditor is perceived as not being independent in the course of audit, confidence, trust and reliance of users in the financial statements is undermined. Indeed, if the auditors do not perform the audit work with high degree of independence, then, public trust is broken and no reliance can be placed in the financial statements by users for their decision making purposes. Auditor's lack of independence has far reaching consequences on audit quality (Saputra, 2015; Yakubu and Williams, 2020; Zayol, Kukeng and Iortule, 2017), financial reporting quality (Olagunju, 2011; Otuya, 2019), resources allocation on the capital market (Tribunella and Tribunella, 2011), the accounting profession, and the economy at large.

The empirical works on auditor's independence have estimated the concept as the natural logarithm of audit fee (Firth, 1997; Salawu, 2017). Firth (1997) suggested that to evaluate auditors independence natural logarithm of fees obtained from services provided is a relevant basis. Put differently, this criterion is based on revenue derived by the audit firm from the client. Practically, where the audit firm generates revenue from a particular client beyond a threshold, there is likelihood of auditor's independence to be impaired.

2.1 Determinants of Auditor's Independence

The determinants of auditor's independence are those factors that tend to influence or weaken the independence of the auditor while performing the audit assignment. The independence of auditors is shown to be affected by a number of factors such as audit firm's tenure, provision of non-audit services by the auditor, size of the audit fees relative to client size, size of audit firm, level of competition in the audit services market, audit committee, and auditor-client relationship (Albaqali and Kukreja, 2017; Al-Khoury et al., 2015; Abubakar and Ahmad, 2009; Herath and Pradies, 2018; Kammenga, 2016; Salawu; 2017). However, the current paper has interest in examining the impact of audit firm size, audit firm rotation and provision of non-audit services on auditor's independence. Thus, the review that follows is focused on these three factors.

Audit firm size is about how large or small an audit firm is. In Nigeria, audit firms are broadly classified into big and small audit firms. The big audit firms often referred to as the Big-4 include PricewaterhouseCoopers (PWC), Klynveld Peat Marwick and Goerdeler (KPMG), Akintola Williams & Deloitte, and Ernst & Young (EY). While the small audit firms also referred to as the non-Big-4 include all audit firms other than the Big-4. According to Okolie (2014), the size of audit firm suggests reputation, international affiliation and integrity of the audit firm; qualities which underscore the quality of audit report issued by the auditor. Francis (2004) argued that the big audit firms usually provide better quality audit than their smaller counterparts. This is because large audit firms can make huge investment in the provision of training courses and other resources to improve the competency of all staff which will translate to high quality audit services with less interference by client (Sawan and Alsaqqa, 2013). In particular, larger audit firms are shown to be less exposed to loss of auditor's independence than smaller audit firms because they are less reliant on any one client. The audit fee received from any one client may only be a small proportion of the total revenues, therefore, are able to resist management influence to sustain independence than smaller audit firm.

Kammenga (2016) noted that a close relationship is most likely to develop between small audit firms and their client because of their providing personalized accounting services. Carren (2013) and Albeksh (2016) argued that small audit firms due to their limited clients may engage in the provision of more personalized services. The provision of such services endangers independence. However, Shockley (1981) documented that it is erroneous to presume that big audit firms are immune to pressures from their clients. In fact, the Arthur Andersen and Enron case in 2001 in the US shows that the big audit firms may not act independently of their clients. Kammenga (2016) would therefore submit that an audit firm being a Big-4 or large firm is no guarantee of ability to resist pressures from clients thereby act independently.

The size of audit firm is often expressed in terms of assets, capital base, geographical spread or number of personnel. In a study, Albeksh (2016) argued that to measure audit firm size in relation to auditor's independence, geographical spread of the firm has to be considered. They advocated that firms with wider geographical spread are more independent. This position clearly supports the view that the bigger or larger an audit firm is, the more independent it could be from the client. Thus, the current study tests the null hypothesis which states that:

H₀₁: Audit firm size has no significant effect on auditor's independence in DMBs in Nigeria.

Audit firm rotation relates to the setting of limit regarding the number of years that an auditor can provide statutory audit service to a given company after which that same auditor is no longer eligible to continue in the capacity as the statutory auditor. The call for and regulations on audit firm rotation has intensified following increased cases of accounting scandals such as Enron,

WorldCom, Parmalat and Cadbury in the last two decades (Herath and Pradies, 2018). The Public Company Accounting Oversight Board (PCAOB) Release No. 2011-006 (2011) clearly identified two potential benefits of auditor rotation. Firstly, it is argued that if audit firm rotation is emphasised, the incentive for auditors to resist pressure from management would increase. Secondly, the appointment of a new audit firm would bring new ideas and perspectives to audit that will increase audit quality and financial reporting quality at large.

The fundamental argument for audit firm rotation is derived from the fact that rotation eliminates familiarity problem (Herath and Pradies, 2018; Otuya, 2019). The investigation into accounting scandals involving Enron and WorldCom in US and Cadbury Plc in Nigeria revealed in part that familiarity with the client due to long audit tenure was responsible for the inability of the auditors to render quality audit (Geiger, Raghunandan and Rama, 2005; Okaro and Okafor, 2013). Notwithstanding the argument for auditor rotation, another school of thought advocates against auditor rotation. The arguments of this school of thought are based on the grounds that auditor rotation will increase costs of audit. Firstly, rotation will increase cost because of frequent duplication of start-up. Secondly, there is also a cost in terms of the learning time that a new auditor will take to get familiar with the client operations that is necessary for effective audit (DeFond and Zhang, 2014).

The need for auditor rotation has been recognized around the world and regulatory authorities have taken steps by regulating on the length of time an auditor can stay with a particular company. For example, in the US, following the Enron scandal, the Sarbanes-Oxley (SOX) Act was passed which requires auditor rotation after 5 years. In Korea, the External Audit Act of 1996 requires for mandatory rotation after every 3 years. In the UK, the Competition and Market Authority (CMA) Order introduced in 2019 requires public interest companies to rotate their auditor every 20 years but with a mandatory tender at the 10-year midpoint. In Nigeria, it was not until 2005 when the CBN rolled out a regulation requiring banks to mandatorily rotate their auditors every 10 years. However, there is no other regulation on the subject matter regarding all other quoted companies in Nigeria. In fact, the major companies regulatory Act, the Companies and Allied Matters Act (CAMA) 2004 as amended provides for the annual appointment of auditor at the Annual General Meeting by shareholders but failed to regulate on the maximum number of years that an audit firm could provide services to a particular client.

Following the recognition of the need and regulation of audit firm tenure by the regulator (i.e. CBN) of the banking industry in Nigeria, this current study formulated and tested the null hypothesis which states that:

H₀₂: Auditor's rotation has no significant effect on auditor's independence in DMBS in Nigeria.

Non-audit services refer to all accounting services provided by the professional accountant other than statutory audit function. Non-audit services include; business performance management services, tax services, computer hardware and software installation, investment banking, internal audit outsourcing, strategic management planning, risk assessment and human resource planning. In the literature, non-audit services have been measured as the amount received in fees for non-audit services from a particular client by the audit firm over the total revenue earned in a year (Sikka, 2009).

There is a debate in the literature regarding the compatibility of the provision of consulting and auditing service by auditors. The proponents of the auditor engaging in the provision of non-

audit services argued that most non-audit services are not frequent and they improve the client's firm. This school of thought believes that the statutory auditor not rendering professional services where required may lead to a loss of very important advice to the client. This school believes that engaging in consultancy services makes the bargaining position of the auditor stronger, hence, the tendency of the auditor not giving into pressures when conducting audit function. Frankel, Johnson and Nelson (2002) documented that the provision of consultancy services increases the power and independence of the auditors. In fact, empirical evidence by Aamir and Farooq (2011) indicates that the provision of non-audit services increases auditor's independence. Tepalagul and Lin (2015) support this position by maintaining that the auditor combining the statutory audit function and rendering non-audit services increases knowledge about the client that reduces engagement risk and increase auditor's independence.

The opposing school of thought holds that engagement in the provision of non-audit services by the auditor results to the auditor earning much revenue from the client that may impair independence (Herath and Pradies, 2018). In fact, the SOX Act of 2002 in the US prohibits an auditor from engaging in some non-audit services on the grounds of likelihood of developing economic bond between auditor and client which compromises auditor's independence. There is also empirical evidence suggesting that auditors engaged to perform non-audit services become less critical when reviewing their own work when they assume the position of the statutory auditor to the same client (Schneider, Church and Ely, 2006). Several studies have been conducted examining the perception of third parties, auditors and firms on this issue. Studies by Abu Bakar, Abdul Rahman and Abdul Rashid (2005); Krishnan, Sami and Zhang (2005) and Alleyne, Devonish and Alleyne (2006) found that the provision of non-audit services negatively impacts auditor's independence. These works suggest that the provision of significant non-audit services creates a relationship between the auditor and the client, which eventually affects auditor's independence negatively.

Based on the foregoing, this current study tests the null hypothesis which states that:

H₀₃: The provision of non-audit services by the auditor does not significantly impair independence in DMBs in Nigeria.

2.3 Empirical Review

Albeksh (2016) and Carren (2013) provided empirical evidence to show that there exists a positive relationship between the audit firm size and auditor's independence. Also, earlier studies by Shockley (1981) revealed that compared to larger audit firms, smaller audit firms experience higher degree of independence impairment when in a conflict situation with their clients. Salawu (2017) using 65 listed companies in the Nigerian Stock Exchange (NSE) found that audit firm size negatively and significantly impacts auditor independence. The study employed Generalized Method of Moments (GMM) for analysis.

With respect to auditor rotation and auditor's independence; Bae, Rho and Ro (2007) examined the effect of mandatory auditor rotation on auditor's independence in Korea after the introduction of the External Audit Act of 1996 which required all listed firms to rotate their auditors after three years. The study found that mandatory auditor rotation significantly lowers discretionary accruals. In particular, the study found evidence that prolonged audit tenure limits auditor's independence. Similarly, Salawu (2017) found that auditor rotation is negatively and significantly related with auditor independence in Nigeria. Also, Cameran, Prencepe and Trombetta (2008) found no empirical evidence to support the claim that mandatory audit firm

rotation improves auditor's independence of Italian firms. The study proxied auditor's independence with abnormal working capital accruals. Albaqali and Kukreja (2017) empirically found that auditor rotation is the least factor that influences auditor independence in Bahrain.

Studies on the relation between the provision of non-audit services and auditor's independence show mixed results. Frankel, Johnson and Nelson (2002) revealed that significant non-audit services fee relative to total audit fees is associated with the likelihood to bias the auditors' opinion regarding financial reports audited. This led the authors to conclude that the rendering of significant amount of non-audit services constitutes a threat to auditor's independence. In fact, Albaqali and Kukreja (2017) based on a survey whereby questionnaire was administered to 307 auditors and employing multiple regression analysis, reported that non-audit services is the most influential factor affecting auditor independence. The study investigated the influence of 8 factors on auditor independence in Bahrain. While the foregoing studies show that auditor's engagement in non-audit services limits independence, Wang and Hay (2013) found otherwise. Wang and Hay (2013) investigated the relationship between non-audit services and auditor's independence of listed companies in New Zealand in 2011.

This paper is anchored on the agency theory. The agency theory encapsulates the relationship between managers as agents and shareholders as principal in modern corporation. The shareholders hire managers to run the corporation on their behalf. The ordinary expectation is that managers as agents will run the corporation in the best interest of shareholders as their principal. However, this is often the case as managers may tend to pursue their interest above that of shareholders thereby creating a conflict of interest situation (Jensen and Meckling, 1976; Otuya, 2019). Normally, managers render a periodic stewardship to shareholders in form of preparing annual financial statements. Due to the conflict of interest, managers may alter financial reporting process to achieve their self-interest.

To address this, auditing of financial statements becomes important. Eilifsen, Messier, Glover and Prawitt (2010) asserted that auditing is critical in bridging information gap in the principal-agent relationship in modern corporation. Audit firms or auditors are engaged by shareholders to examine the accounts prepared by managers and to express an opinion regarding the true and fair view of these financial statements (Otuya, 2019). However, in the absence of auditor's independence, auditors may not render quality audit that guarantee the highest quality of financial statements which shareholders as owners rely upon to assess the performance of management and their companies. It is on this premise that the current paper examined the extent of the impact of audit firm size, audit rotation and non-audit services on auditor's independence in deposit money banks in Nigeria.

3. Methods and Data

This paper adopts a quantitative approach whereby data on the variables were extracted from secondary source and subjected to analysis using some appropriate statistical techniques on the basis of which conclusions were drawn. In particular, data was generated from annual reports and accounts of 13 DMBs listed on the Nigerian Stock Exchange as at 31st December, 2018. Other DMBs were excluded from the study because they were either merged during the study period or listed after 2006 which was selected as the based year, meaning these banks had incomplete data. The period covered was 2006 to 2018. The choice of 2006 as the based year was because the CBN code of corporate governance which prescribed for a 10-year audit tenure was introduced in that year. The independent variables were audit firm size, audit rotation and

non-audit services while the dependent variable was auditor’s independence. The variable audit firm size was measured as a dummy variable whereby 1 was assigned if a bank was audited by the Big4 audit firms, otherwise 0 (Albeksh, 2016). Similarly, auditor rotation was assigned a dummy variable 1 if there was rotation after 10 years, otherwise 0 (Bae, Rho & Ro, 2007) while non-audit services was assigned a dummy variable 1 if the statutory auditor renders non-audit services in any year, otherwise 0 (Sikka, 2009). The dependent variable, auditor’s independence was measured as natural logarithm of audit fee (Firth, 1997; Salawu, 2017).

The paper adopted descriptive statistics for data analysis and tested the formulated hypotheses using multiple regression analysis. Multiple regression was adopted because the aim was to predict auditors independence based on several variables including audit firm size, audit rotation and non-audit services. The statistics is appropriate when examining linear relationship between one dependent variable and multiple independent variables. Diagnostic tests such as stationary test, normality, multicollinearity and heteroskedasticity tests were conducted to ensure the data pass the test of the selected technique of analysis.

The regression model is stated as follows: $AID_{it} = \beta_0 + \beta_1 AFS_{it} + \beta_2 ADR_{it} + \beta_3 NAS_{it} + e_{it}$

Where: AID =Auditor Independence, AFS =Audit Firm Size, ADR =Auditor Rotation, NAS =Non-Audit Services, $\beta_0, \beta_1, \beta_2, \beta_3$ = Regression Coefficients, $_{it}$ = time and bank, e =Error term. A prior expectation was that AFS and ADR will impact AID positively while NAS will impact AID negatively. The data were analysed using E-View software.

4. Results and Discussion

Table 1 contains the descriptive statistics results of the study variables that helps explain the trends in the data sets.

Table 1 Descriptive Statistics

Variable	Mean	Std. Dev.	Min	Max	OBS
AID	4.3055	0.7429223	0.4987	7.6789	169
AFS	0.7363	0.4430993	0.0000	1.0000	169
ADR	0.8500	0.358354	0.0000	1.0000	169
NAS	0.6786	0.468702	0.0000	1.0000	169

Source: E-Views Output, 2021.

Table 1 shows that the mean auditor’s independence was 4.3055 indicating the average amount in audit fee paid to audit firms by banks during the study period. The mean value of audit firm size (AFS) was 0.7363 while that of auditor rotation (ADR) and non-audit services (NAS) were 0.8500 and 0.6786 respectively. The AFS of 0.7363 is an indication that about 73.63% of the audit firms that audited banks during the study period were the Big-4 auditors. The ADR of 0.8500 means that about 85.00% of the banks changed their auditors after the 10 years period required by the CBN. Also, the NAS value of 0.6786 is an indication that about 67.86% of the auditors rendered one form of non-audit services or another to clients during the period studied. The standard deviations show elements of wide dispersion around the mean values of all the variables, except auditor independence (AID) which has a low standard deviation compared to the mean value of 4.3055.

A number of diagnostics tests were conducted to determine whether or not the data used for analysis satisfies the basic assumptions of linear regression therefore reliability of results. To tests for normality, the Jarque-Bera test was performed. This test is a goodness-of-fit test that

shows whether sampled data have the skewness and kurtosis matching a normal distribution. The results of the test show Jarque-Bera value of 4.0217 with corresponding probability value of 0.1339 indicating that the data is normally distributed. To test for multicollinearity problem, Variance Inflation Factor (VIF) was used. The VIF in the data sets range from a minimum of 1.0147 to a maximum of 1.2047. Since the VIF for all variables is less than 10, it means that there is no multicollinearity problem between the independent variables. Further, the Breuch-Pegan test was used to examine the presence of heteroscedasticity. The result of the Breusch-Pagan/Cook-Weisebaerg test shows F-statistics value of 2.4868 with probability chi² value of 0.0859 indicating the absence of heteroskedasticity but presence of homoscedasticity, the ideal condition for the test. To decide between which of either the fixed effect model or random effect model is more appropriate for interpretation, Hausman specification test was performed. The results of the Hausman test shows chi² value of 7.0368 with corresponding p-value of 0.0707, implying that the random effect model was the appropriate model of analysis. Further, the Breusch and Pagan Lagrangian Multiplier test for random effects was conducted to decide whether the random effect was more appropriate than the ordinary least square method. The result indicated p-value of 0.0001 which is less than the 0.05 level of significance, implying that the random effect is preferred for interpretation.

The result of random effect regression model is presented in Table 2.

Table 2 Regression Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.194385	0.094989	-2.046404	0.0428
AFS	0.976139	*0.083048	11.75395	0.0000
ADR	0.194385	0.060897	3.192039	0.0018
NAS	-0.019116	0.045855	-0.416874	0.6775
Effects Specification				
Period fixed (dummy variables)				
R-squared	0.588993	Mean dependent var		0.864286
Adjusted R-squared	0.550158	S.D. dependent var		0.343715
S.E. of regression	0.230530	Akaike info criterion		-0.008609
Sum squared resid	6.749321	Schwarz criterion		0.264543
Log likelihood	13.60265	Hannan-Quinn criter.		0.102392
F-statistic	15.16644	Durbin-Watson stat		0.496509
Prob (F-statistic)	0.000000			

Source: E-View Output, 2021.

Table 2 shows that the R² of the regression model is 0.588993 which implies that about 59% of auditor's independence is explained by the combined variables of AFS, ADR and NAS with the remaining 41% attributable to excluded variables in the model. The F-Statistics of 15.16644 which is significant at the 0.05 level of significance (p= 0.0000) is further evidence that the model is a good fit, therefore, the results can be relied upon.

The individual results of the variables in Table 2 shows that the coefficient of audit firm size (AFS) is 0.976139 meaning that an increase in audit firm size will result to about 0.976139 increase in auditor's independence. The p-value of 0.0000 is less than the chosen 0.05 level of significance and is premise to conclude with respect to hypothesis one (Ho₁) that audit firm size

has positive and statistically significant effect on auditor's independence in DMBs in Nigeria. This finding corroborates Carren (2013) and Albeksh (2016) but contradicts Salawu (2017).

The results with respect to auditor rotation (ADR) revealed that the variable has a coefficient of 0.194385 implying that a unit increase in ADR will cause about 0.194385 increase in auditor's independence. The variable ADR is associated with a p-value of 0.0018 which is less than the 0.05 level of significance. Hence, it was concluded with respect to hypothesis two (H_{02}) that auditor rotation has a positive and significant effect on auditor's independence in DMBs in Nigeria. This finding supports the proponents of auditor rotation who consider rotation as a way of improving auditor's independence. In particular, the finding refutes the earlier studies by Cameran, Prencipe and Trombetta (2008) and Salawu (2017).

Finally, the results with respect to the variable non-audit services (NAS) indicates a coefficient of -0.019116 meaning that a unit increase in auditor's provision of non-audit services will led to about 0.019116 decrease in auditor's independence. The corresponding p-value of 0.6775 exceeds the 0.05 level of significance which is evidence to conclude with respect to hypothesis three (H_{03}) that the provision of non-audit services negatively but non-significantly impairs auditor's independence in DMBs in Nigeria. This finding is in line with earlier findings by Frankel, Johnson and Nelson (2002) and Albaqali and Kukreja (2017) but is contrary to Wang and Hay (2013).

The findings from this study have a number of implications for policy makers (especially the CBN and professional accounting bodies) and shareholders who appoint external auditors for their companies. First, the finding that audit firm size has a positive and significant impact on auditor's independence means engaging the Big-4 auditors as auditors in banks will guarantee independence in the performance of audit function therefore higher audit quality. With higher audit quality, the shareholders can be rest assured that the information in the financial statements produced by management is accurate and reliable for their decision making purposes.

The finding that auditor rotation has a significant positive effect on auditor's independence suggests that rotating the statutory audit will improve or ensure greater auditor's independence. This is therefore empirical evidence for regulators to introduce a mandatory regulation on rotation of auditors after serving a client for a number of years. Compared to other jurisdictions where shorter time periods are required within which companies are to change auditors, the CBN may consider revising the ten-year period as it is relatively lengthy.

The finding that NAS has a negative but non-significant impact on auditors independence means that the debate that statutory auditor's engagement in the provision of non-audit services such as accounting and taxation services affects audit quality may not be totally correct. In other words, it is implicit from the findings that whereas NAS cause a decrease in auditor's independence, independent auditors engaged to perform statutory audit as professionals are very able to differentiate between services performed as NAS and statutory audit assignment. Thus, they are able to professionally avoid allowing interference of NAS with statutory audit function. However, there is need to caution here that professional accounting bodies do not need to relax on the issue of auditors performing statutory audit and rendering NAS to the same client, if the integrity of the accounting profession is to be maintained in the eyes of the public. One way to ensure professional accountants play by the rules is for professional accounting bodies to institute stringent measures (regulation) against auditors found guilty of allowing NAS to influence their work as statutory auditors.

5. Conclusion and Recommendations

The work and opinion expressed by external auditors on the financial statements produced by corporate management is a strong reason users rely on these statements in making their various decisions. The ability of the auditor to uphold independence while performing audit is very critical to the audit outcome. Several factors have been identified in the literature that may act to impair auditor's independence. This paper examined the extent to which audit firm size, auditor rotation and provision of non-audit services impact on auditor's independence in DMBs in Nigeria. From the results of the data analysis, there is enough evidence to conclude that audit firm size and auditor rotation matter most in maintaining auditor's independence in DMBs in Nigeria but provision of non-audit services does not matter. Based on the findings, it is recommended that the CBN and professional accountancy bodies as policy makers should continually, review and strengthen legislation bordering on auditor's independence to enable auditors maintain a sound independent position while serving as external auditors. In particular, the ten-year mandatory rotation period should be reviewed downward by the CBN while professional accountancy bodies should evolve more stringent penalties on their members who compromise their independence as a result of engagement in non-audit services. For the shareholders, there is evidence from this paper that they should consider the size of the audit firm when appointing statutory auditors at the annual general meeting. This is because bigger audit firms are better able to maintain independence that guarantee high quality audit therefore financial reporting quality.

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