Article

EFFECT OF FRAUD OPPORTUNITY ON EARNINGS QUALITY OF LISTED BANKS IN NIGERIA

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Abstract

This study investigated the effect of fraud opportunity on earnings quality and the moderating role of board diligence on the relationship between fraud opportunity and earnings quality of banks in Nigeria. Earnings quality was proxied by earnings persistence and timely loss recognition, and fraud opportunity was measured by a collection of fraud indicators in the instrument designed for the study. The study was anchored on fraud triangle, diamond, pentagon and hexagon theories, as each of the theories recognize opportunity as a fundamental driver of fraud. Cross-sectional survey design was adopted and a questionnaire was administered to 1,152 senior staff in 384 branches of listed banks in the South-East region, Nigeria. Only 633 of the bank officers returned the completed questionnaire to the researchers. The study used the ordinary least square technique to analyze the collated data and implemented hierarchical moderated regression analysis to test the moderating effect of board diligence. Results showed that fraud opportunity had a significant, negative effect on earnings persistence and timely loss recognition. Board diligence moderated the negative relationship between fraud opportunity and earnings quality. The study therefore concluded that the opportunity to commit fraud hampers the quality of earnings reported by listed banks, but effective supervisory and monitoring role of the board through its committees, especially the audit committee, will mitigate fraud opportunity and increase the quality of reported earnings. It was therefore recommended that the board monitoring role should be enhanced, and the use of technology and staff training should be intensified to reduce fraud opportunities.

Keywords: Fraud opportunity, earnings persistence, timely loss recognition, board diligence

Introduction

Good quality information stands as a beneficial guide to a large number of users in economic decision making. It is obvious that profit information used by investors and other interested parties serves as an indicator of the efficient use of funds invested in the company and realized in the rate of return which also serves as an indicator for the increase in prosperity. However, the existence of information asymmetry and the tendency of external parties (investors) who might pay more attention to profit information as a parameter of company performance, have incentivized management to manipulate earnings information. Large number of financial scandals have provided further evidence of audit failure that has serious consequences for the business community, especially investors where fraudulent financial reporting carries the greatest impact (Association of Certified Fraud Examiners [ACFE], 2022). The banking sector is one the key sectors of any economy. Perpetual escalation of fraud in Nigerian banks for over a decade has continued to induce loss of public

confidence, threaten the going concern of commercial banks and cause adverse effect on shareholders' wealth, requiring improved statutory and regulatory frameworks governing both the industry and the accounting practice (Uwakwe, 2020). Today, the integrity and functional roles of Nigerian banks have been impaired due to pervasive increase in fraud and other deviant behaviours. According to Amme *et al*. (2016), fraud not only incapacitates Nigerian banks' effective delivery of their economic functions, but also piles pressure on the nation's scarce foreign exchange resources with no visible economic benefits being transmitted to the productive sector and the general public.

The Nigerian Banking Sector has become a soft target for fraudsters (internal and external) who have been getting away with colossal amounts of cash daily, weekly, monthly, quarterly and annually. Most corporate financial institutions in Nigeria are subject to fraud risks. Large frauds have led to the downfall of most financial institutions, massive investment losses, significant costs, incarceration of key individuals, and erosion of confidence in capital markets. Publicized fraudulent behaviour by key executives has negatively impacted the reputations, brands, and images of many organizations around the globe. According to PKF Report (2015), fraud and error resulted in average losses as much as 5.47% of expenditure. Also, according to the Association of Certified Fraud Examiners (ACFE), typical organization loses 5 % of its revenue to fraud each year. The Banking and Financial Services sector had the highest number of fraud cases analyzed at (ACFE, 2014). Fraud results in financial losses to the Banks and their customers. Shareholders' funds are eroded and this depletes the capital base of the bank. The end result is bankruptcy and the loss of confidence in the banking sector as a whole (Okaro, 2014).

Financial statements of various organizations (including banks) are supposed to present a fair information about the financial position, operating performance and cash flows of the company, having also in mind that the customers, creditors investors, governmental institutions or shareholders of these banks make decisions regarding the development of the company on the basis of the information provided in those financial statements (Kanapickienė & Grundienė, 2015). However, the case is sometimes the reverse of what it ought to be as management tends to use their unique position to perpetrate fraud due to their ability to manipulate accounting records and prepare fraudulent financial statements by over ridding controls that otherwise appear to be operating effectively. A number of studies have examined the relationship between fraud drivers and fraudulent financial reporting, using various proxies of financial statement fraud and fraud drivers (Akbar, 2017; Okafor & Egbunike, 2023). Some of these proxies have many weak points. Even quantitative earnings quality measures have similar drawbacks (Dechow, Ge & Schrand, 2010). This study adopted survey research approach which provided unique opportunity of obtaining information based on the perception of a wide range of experts with rich diverse experiences. Not many studies have considered the moderating effect of board diligence in the relationship between fraud drivers and financial reporting quality. Some studies, however, have considered the moderating role of audit committee on this relationship (Nugroho & Diyanty, 2022; Yayangida & Mohammed, 2023), but how effective the audit committee becomes depends at least in part on the commitment of the board. By examining the moderating effect of board diligence on the relationship between fraud opportunity and earnings quality using a cross sectional survey research design, this study fills important gap in literature.

Concept of fraud and fraud opportunity

Fraud has been defined in different ways in the literature by scholars and experts. In a broad sense, "fraud can encompass any crime for gain that uses deception as its principal modus operandi" (Wells, 2013 p. 2). According to Onyefulu and Offor (2016), fraud consists of both the use of deception to obtain an unjust or illegal financial advantage and intentional misrepresentations, affecting the financial statements by one or more individuals among management, employees, or third parties. In the case of financial statements, fraudulent presentations may arise through wrong use of

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judgements in determining estimates, timing of transactions, wrong valuation of intangibles, and inadequate disclosures of financial and non-financial transactions. Fraudulent financial reporting practices may be motivated by management's desire to obtain bonus or impress investors and other users of accounting information. Fraud may be classified broadly into management fraud and employee fraud. According to Fakunle (2006), management fraud often involves the manipulation of the records and the accounts, typically by the enterprise's senior officers with a view to benefiting in some indirect ways. An example is, obtaining finance under false pretenses, or concealing a material obligation, to conceal the organization's true position. Employee frauds, on the other hand, are frauds that are perpetrated by the employees of an organization. Such frauds will include fictitious payment of suppliers, alteration of invoices, double payment of invoices, suppression of credit notes received, and different types of payroll fraud. Fraud is an unfortunate, prevalent phenomenon in the Nigerian banking system and in other industrial sectors in the economy. Kolawole, Young and Egwuatu (2023) reported that fraud increased by 277 per cent in the Nigerian banking industry in the second quarter of 2023. The fraud was committed by both staff and fraudsters outside the banking system.

Fraud opportunity

The causes of bank fraud may be grouped into institutional factors and environmental factors. The institutional factors include poor management of resources, inexperienced bank staff, poor remuneration, frustration from feelings of unfair treatment of staff, poor internal control system, poor booking systems, inadequate staff strength leading to a few staff dealing with many functions, delayed rotation of staff, poor staff co-ordination, recruitment system that is not based on merit, irregular staff training, and greedy attitude of staff; while the environmental and social factors include economic hardship, high societal appreciation of the rich, ineffective law enforcement against criminals, high societal rating of the financial resources of bank staff, political instability, and economic burden arising from family

demands. These factors drive fraud in the banking system (Uwakwe, 2020)

Fraud opportunity (circumstances that allow the occurrence of fraud) in the Nigerian banking system are essentially weakness in internal control system, the quality of management and managerial response to indiscipline, and poor accounting systems.

Earnings quality

Earnings quality has been defined as the "ability of reported earnings to reflect the company's true earnings, as well as the usefulness of reported earnings to predict future earnings" (Gissel, Giacomino & Akers, 2005). There are several measures of earnings quality. Dechow et al. (2010) categorized earnings quality broadly into three: those that deal with earnings properties (such as earnings persistence, earnings smoothness and timely loss recognition); those concerned with investors' response to earnings; and external indicators of misstatements in earnings. This study used two measures of earnings quality that focused on the property of earnings; namely, earnings persistence and timely loss recognition.

Earnings Persistence

Earnings persistence on the other hand could be defined as the continuity and durability of the current earnings. A more persistent earnings number reflects higher quality of earnings than a less persistent earnings number (Dechow et al., 2010). Persistent earnings are more sustainable than earnings composed of high proportion of non-recurring items. Thus, to analyze whether or not earnings are persistent, the first step is to classify into recurring items and non-recurring items. This method is usually used by management to make investors believe that the reoccurring part is higher than it actually is. The commonly used method to overstate earnings is to mis- classify normal operation expenses as being expenses from discontinued operations. Analysts are expected to carefully analyze disclosures that reconcile pro-former income with reported income. This enables investors to be able to evaluate whether the items included as non- recurring are actually non- recurring. Sometimes a regression analysis could be run, which is another method to analyze whether or not earnings are of

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high quality (Uwakwe, 2020). Put simply, earnings persistence refers to the stability of current earnings.

Timely Loss Recognition

Chukwu and Okoye (2016) defined timely loss recognition as the timeliness in the recognition of economic losses in the financial statements of reporting entities. It is the promptness with which reporting entities incorporate economic losses into its financial statement. Dechow *et al.* (2010) pointed out that there is demand for timely loss recognition to combat managers opportunistic behavior, which arises when managers take advantage of the information asymmetry between them and other stakeholders, for example, creditors, shareholders and lenders) to report earnings, or make investment decisions that may lead to transfer of wealth of other stakeholders to themselves. On this note, timely loss recognition provides a more conservative estimate of firm value to assist corporate boards in making more informed decisions.

Board diligence

Diligence is exercise of carefulness and persistence in conducting an assignment. Diligent board members will attend meetings regularly, participate actively in decision makings, and its committees, especially the audit committee will function effectively.

Empirical review

Nwankwo (2013) evaluated the impact of fraud on the performance of commercial banks in Nigeria. It also sought to ascertain the relationship between bank ATM Fraud, Forged Cheque, Clearing Cheque Fraud and bank performance. The methodology adopted in testing objective of this study was regression analysis. The outcome of the research revealed that there is significant impact of fraud on the performance of commercial banks in Nigeria. The implication of this is that if the level of fraud in commercial bank did not reduce to the barest minimum, it may not allow commercial banks to perform well and as well contribute to the growth of Nigeria economy. He recommends that there is an urgent need for effective monitoring of bank fraud through the use of ATM to allow for

the growth of Nigeria commercial banks performance. Imegi and Ogbeide (2017) undertook an empirically assessment of frauds on banks' liquidity in Nigeria for the period 1994 to 2015 using Johansson co-integration technique and error correction mechanism. The findings revealed that total number of fraud cases, actual amount involved in the fraud and the loss associated with it negatively affect banks liquidity position in the long- run, though the effect is not as strong as in the short run. Adeniyi (2016) studied the effect of forensic auditing and financial fraud in Nigerian commercial banks (DMBs) and was examined by analyzing questionnaires using logistic regression analysis. The study found that forensic auditing has a significant effect on financial fraud control in Nigerian (DMBs). A strong internal control system was recommended in the study to reduce the occurrence of fraud. Inaya and Isito (2016) investigated the social impact of fraud on the Nigerian banking industry. Ex-post facto research design was adopted for the study. Data were collected from Nigerian Deposit Insurance Corporation and the commercial banks statement of accounts for the period 1990-2014. Ordinary Least Square (OLS) with its Best Linear Unbiased Estimate (BLUE) property was used in analyzing the data. They discovered that banks in Nigeria thrive under high rate of fraud and fraud has negative social impact on the Nigerian banking industry.

Theoretical framework and hypotheses development

Several theories of fraud discuss the factors that motivate fraudulent behaviour among employees. These theories constitute models for assessing fraud in different work settings. The theories include fraud triangle theory, fraud diamond theory, fraud pentagon theory and fraud hexagon theory. Fraud triangle theory identifies opportunity (or perceived opportunity), pressure, and rationalization as the circumstances that lead employees to commit fraud. Fraud Diamond theory includes capability as one of the fraud factors, while fraud pentagon theory identifies five elements (pressure, opportunity, rationalization, competence and arrogance) as fraud drivers. The fraud hexagon theory has six

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elements - the five elements of fraud pentagon theory plus collusion – as the factors that influence the occurrence of fraud. All the fraud theories have *opportunity* for fraud as a factor that influences the occurrence of fraud.

A number of studies have used these theories and have reported conflicting association between fraud opportunity and fraudulent financial reporting. Akbar (2017) reported that fraud opportunity was not significantly associated with fraudulent financial reporting. The study relied on all the theories listed above. Okafor and Egbunike (2023) reported a significant negative relationship between opportunity and fraudulent financial reporting in deposit money banks in Nigeria, but Nugroho and Diyanty (2022) found a positive relationship between opportunity and fraudulent financial reporting. Fraudulent financial statements affect the quality of reported earnings of an entity. Our measures of earnings quality in this study are earnings persistence and timely loss recognition. A manipulative management may not recognize losses on a timely basis, and may engage in manipulating earnings. Given the inconsistence in prior research on the relationship between fraud opportunity and financial statements fraud, the first two hypotheses of this study are framed in the null form as follows.

$H0_1$: The effect of fraud opportunity on earnings persistence is not statistically significant.

$H0_2$: The effect of fraud opportunity on timely loss recognition is not statistically significant

In the context of financial reporting, opportunity refers to circumstances that allow management to manipulate financial statements. Fraudulent financial reporting can readily occur where internal control system is weak and the mechanisms for supervising managerial activities is ineffective. Such mechanisms will include the board and its committees, especially the audit committee. The audit committee is mandated to review financial statements of the organisation, even the audited financial statements. They also ensure that the internal control system and the risk management systems are functional. Thus, the audit committee has the wherewithal to mitigate fraudulent financial statements. In other words, weak supervisory activities of the audit committee will provide an opportunity for fraudulent financial reporting. The use of estimates in the valuation of inventory, in allowance for receivables, and other subjective considerations in financial reporting can also provide opportunity for fraud (Akbar, 2017; Khatwani & Goyal. 2019). An audit committee that is well composed and committed will adversely affect the incidence of fraudulent financial statements. Nugroho and Diyanty (2022) reported that audit committee moderated the relationship between fraud opportunity and fraudulent financial statements. The oversight activities to ensure high quality financial reporting can be delegated by the board to the audit committee, but such delegation will not remove the board from the ultimate obligation of ensuring reliable financial reporting (Leka, 2019). Thus, the commitment of the board, towards the effectiveness of monitoring and supervisory activities of its committees, especially the audit committee, will likely moderate the relationship between fraud opportunity and fraudulent financial reporting. The third and fourth hypothesis are therefore framed in the null form as follows:

$H0_3$: Board diligence does not significantly moderate the relationship between fraud opportunity and earnings persistence

$H0_4$: Board diligence does not significantly moderate the relationship between fraud opportunity and timely loss recognition

METHODOLOGY
Research design and instrumentation
This study adopted cross sectional survey design which entails obtaining data from questionnaire administered to respondents at a point in time. The instrument used for data collection was a structured questionnaire entitled "Fraud Opportunity and Earnings Quality" questionnaire. The instrument had 20 items divided into four sections, dealing with fraud opportunity, earnings persistence, timely loss recognition, and board diligence. The instrument was designed in a five-point rating scale varying from strongly agree to strongly disagree. The instrument was validated

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by three experts in forensic accounting and three experts in financial reporting quality. The reliability of the instrument was tested using the test retest technique, which yielded a reliability coefficient of 78 per cent.

Population, sample and sampling technique
There are thirty-three commercial banks with a total of 4,437 branches. To ensure participation of knowledgeable respondents with varied experiences the researchers targeted obtaining responses from a wide range of branches.

Applying the Taro Yamane sample size formula (given by n= N/(1 + N(e)^2) yielded a sample size of 367, from a population of 4,437 branches. To draw the sample from the population the researchers relied on the convenience sampling technique given the wide spread of bank branches in the country. Accordingly, the researchers selected branches of *listed banks* in the South East region as these banks have more branches than the other commercial banks in Nigeria. Table 1 below shows the distribution of the branches in the South Eastern region.

Table 1 Breakdown of the Sample Size of the Study

Total number of Listed Bank branches in South East Region, Nigeria

	Abia State	Anambra State	Ebonyi State	Enugu State	Imo State	Total
First Bank	17	24	4	16	7	68
Access bank	14	20	3	16	12	65
UBA	9	14	3	12	6	44
ECOBANK	10	8	7	8	9	42
Union	8	19	1	4	4	36
Zenith	6	13	2	7	4	32
Fidelity	4	10	2	9	4	29
FCMB	5	8	1	5	4	23
GTB	4	9	1	3	4	21
Sterling bank	2	3	0	2	1	8
StanbicIBTC	1	3	1	2	1	8
Unity	2	1	0	1	0	4
Wema bank	1	1	0	1	1	4
						384

Sources: Compiled by the researchers from various bank websites

The total number of the branches computed was 384. Since this number is not so much higher than the 367 computed using Taro Yamane, the study sought information from all the 384 branches. The researcher distributed the instruments to the branches, three for each branch, using research assistants in the various states. The questionnaire was given to three senior officers in each branch, including the branch manager (branch head), the accountant of the branch, and

another senior staff. Total questionnaire distributed was therefore 1,152, out of which 633, representing about 55 per cent of the total distributed, were completed and returned to the researcher through the research assistants. The relatively high mortality rate of the instrument was because some of the targeted respondents complained of being very busy.

Analytical models
The data collated from the questionnaire returned were analyzed using the regression technique. To test the first two hypotheses, the following analytical models were used.

$$ENP = \beta_0 + \beta_1 FOP + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots \quad \ldots\ldots\ldots \quad \text{Eqn 1}$$
$$TLR = \beta_0 + \beta_1 FOP + \varepsilon \quad \ldots\ldots\ldots\ldots\ldots\ldots \quad \ldots\ldots\ldots \quad \text{Eqn 2}$$

To test the last two hypotheses, the study used hierarchical moderated regression analysis based on the following models.

$$ENP = \beta_0 + \beta_1 FOP + \beta_2 BDD + \beta_3 BDD*FOP + \varepsilon \ldots\ldots \qquad Eqn\ 3$$
$$TLR = \beta_0 + \beta_1 FOP + \beta_2 BDD + \beta_3 BDD*FOP + \varepsilon \ldots\ldots \qquad Eqn\ 4$$

where

ENP = Earnings persistence

FOP = Fraud opportunity

BDD = Board diligence

TLR = Timely loss recognition

BDD*FOP = Interaction term for board diligence and fraud opportunity

β_0 = Intercept

$\beta_1, \beta_2, \beta_3$ = Coefficient

ε = Error term

The hierarchical moderated regression analysis is recommended by Jose (2013) as the appropriate technique for determining the effect of the moderator. By using this approach, equation 1 was subsumed in equation 3, since the first step in the hierarchical regression for equation 3 was to regress ENP on FOP. In the next step of the regression, BDD was included in the regression analysis, and in the final step the interaction term was included in the analysis. The analysis in hierarchical stages was performed using SPSS version 21. Equation 2 was similarly subsumed in the analysis based on equation 4. Accordingly, the results of the multivariate analysis presented were only with respect to equations 3 and 4. In using moderated regression analysis, the significance of the R square change, and p value of the coefficient of the interaction terms are very useful in explaining the effect of the moderator (Jose, 2013).

ANALYSIS AND RESULTS
Bivariate correlation

Table 2 presents the Pearson correlation of the variables in the study. The correlation between the independent variable (fraud opportunity, FOP) and the moderator variable (board diligence, BDD) was .30 (30 per cent), suggesting that there was no issue of multicollinearity in the data set as the correlation between the independent variables was far below the threshold of 70 per cent. The correlation between fraud opportunity (FOP) and earnings persistence (ENP) was approximately 50 per cent, but the coefficient was negative and significant ($p < .001$), indicating that the relationship between fraud opportunity and earnings persistence is significantly negative. Thus, as fraud opportunity increases, earnings persistence decreases. Also, the correlation between fraud opportunity (FOP) and timely loss recognition was negative and statistically significant ($p < .001$), suggesting that as fraud opportunity increased, timely loss recognition decreased. Put together, fraud opportunity is negatively associated with earnings quality in the banking industry in Nigeria.

Table 2. Correlation of the variables in the study

		ENP	TLR	FOP	BDD
ENP	Pearson Correlation	1	.276**	-.498**	.368**
	Sig. (2-tailed)		.000	.000	.000
TLR	Pearson Correlation	.276**	1	-.307**	.757**
	Sig. (2-tailed)	.000		.000	.000
FOP	Pearson Correlation	-.498**	-.307**	1	-.300**
	Sig. (2-tailed)	.000	.000		.000
BDD	Pearson Correlation	.368**	.757**	-.300**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	633	633	633	633

** Correlation is significant at the 0.01 level (2-tailed).

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The correlation between board diligence (BDD) and the two measures of earnings quality was positive and significant, suggesting that increase in board diligence is positively associated with earnings quality. However, the correlation coefficient between board diligence and fraud opportunity was negative and significant (p < .001), indicating that as board diligence (BDD) increased, fraud opportunity (FOP) decreased.

Multivariate analysis
Table 3 presents the model summary from the regression analysis of ENP on independent variables. The results for model 1 are from the regression of earnings persistence (ENP) on fraud opportunity (FOP). Model 2 is in respect to the regression of earnings persistence (ENP) on fraud opportunity and board diligence. In model 3, the interaction (FOP*BDD) was added in the analysis, so the results of the model are from the regression of earnings persistence (ENP) on fraud opportunity (FOP), board diligence (BDD) and the interaction term for FOP and BDD. The models are all statistically significant (p < .001) suggesting that each of the models fits the related data set.

Table 3. Model Summary (Equation 3)

Model	R	R Square	Adjusted R Sq	Std. Error	Change Statistics				
					R Sq Change	F Change	df1	df2	Sig. F Change
1	.498a	0.248	0.246	0.73856	0.248	207.673	1	631	.000
2	.548b	0.300	0.298	0.71276	0.053	47.511	1	630	.000
3	.591c	0.349	0.346	0.68803	0.049	47.096	1	629	.000

a Predictors: (Constant), FOP
b Predictors: (Constant), FOP, BDD
c Predictors: (Constant), FOP, BDD, FOPBDD

The R square for model 1 was approximately 25 per cent, indicating that 25 per cent of the variations in earnings persistence was explained by changes in fraud opportunity (FOP). Model 2 shows that board diligence added 5.3 per cent to the explanatory power of the predictors, while in model 3 the interaction term (FOP*BDD) added 4.9 per cent to the explanatory power of the predictors. As shown by the R square change in model 2 and model 3, each of the additions to explanatory power of the predictors was statistically significant (p < .001).

Table 4 ANOVA (Equation 3)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	113.28	1	113.28	207.673	.000b
	Residual	344.193	631	0.545		
	Total	457.472	632			
2	Regression	137.416	2	68.708	135.246	.000c
	Residual	320.056	630	0.508		
	Total	457.472	632			
3	Regression	159.711	3	53.237	112.459	.000d
	Residual	297.761	629	0.473		
	Total	457.472	632			

a Dependent Variable: ENP
b Predictors: (Constant), FOP
c Predictors: (Constant), FOP, BDD
d Predictors: (Constant), FOP, BDD, FOP*BDD

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Table 4 presents the ANOVA from the regression analysis of ENP on the independent variables. The F scores are all significant, and the regression in each case, explained more of the variations in the dependent variable (earnings predictability) than the residual.

Table 5 Coefficient from regression based on Equation 3

Model		Unstandardized Coefficients		Std Coeffs	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.453	0.079		56.399	.000
	FOP	-0.348	0.024	-0.498	-14.411	.000
2	(Constant)	3.615	0.143		25.194	.000
	FOP	-0.298	0.024	-0.425	-12.177	.000
	BDD	0.213	0.031	0.241	6.893	.000
3	(Constant)	4.998	0.245		20.436	.000
	FOP	-0.813	0.079	-1.162	-10.327	.000
	BDD	-0.172	0.064	-0.194	-2.703	.007
	FOPBDD	0.151	0.022	0.767	6.863	.000

a Dependent Variable: ENP

Table 5 presents the results of hierarchical moderated regression analysis of earnings persistence on fraud opportunity (FOP), board diligence (BDD) and the interaction term (FOP*BDD). Model 1 in the Table revealed that the coefficient of fraud opportunity (FOP) was negative and significant at the 1 per cent level.

Model 2 showed that the coefficient of fraud opportunity was also negative while that of board diligence was positive. Model 3 showed that the coefficient of the interaction term for fraud opportunity and board diligence (FOP*BDD) was positive and statistically significant.

Table 6 Model Summary (Equation 4)

Model	R	R Square	Adjusted R Sq	Std. Error	Change Statistics.				
					R Sq Change	F Change	df1	df2	Sig. F. Change
1	.307a	0.094	0.093	1.0397	0.094	65.515	1	631	.000
2	.762b	0.58	0.579	0.70854	0.486	728.703	1	630	.000
3	.782c	0.611	0.609	0.68242	0.031	50.139	1	629	.000

a Predictors: (Constant), FOP
b Predictors: (Constant), FOP, BDD
c Predictors: (Constant), FOP, BDD, FOP*BDD

Table 6 presents the model summary from regression of timely loss recognition (TLR) on independent variables. The results for model 1 is from the regression of TLR on fraud opportunity (FOP). Model 2 is in respect of the regression of TLR on fraud opportunity and board diligence. In model 3, the interaction (FOP*BDD) was added in the analysis, so the results of the model are from the regression of TLR on fraud opportunity (FOP), board diligence (BDD) and the interaction term for FOP and BDD. The models are all statistically significant ($p < .001$) suggesting the each of the models fit the related data set.

The R square for model 1 was approximately 9 per cent, indicating that the 9 per cent of the variations in TLR was explained by changes in fraud opportunity (FOP). Model 2 shows that board diligence added 48 per cent to the explanatory power of the predictors, while the

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interaction term (FOP*BDD) added 3.1 per cent to the explanatory power of the predictors. As shown by the R square change for models 2 and model 3, each of the additions to the explanatory power of the predictors was statistically significant (p < .001).

Table 7 ANOVA (Equation 4)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	70.821	1	70.821	65.515	.000b
	Residual	682.101	631	1.081		
	Total	752.923	632			
2	Regression	436.648	2	218.324	434.887	.000c
	Residual	316.275	630	0.502		
	Total	752.923	632			
3	Regression	459.997	3	153.332	329.252	.000d
	Residual	292.925	629	0.466		
	Total	752.923	632			

a Dependent Variable: TLR

b Predictors: (Constant), FOP

c Predictors: (Constant), FOP, BDD

d Predictors: (Constant), FOP, BDD, FOP*BDD

Table 7 presents the ANOVA from the regression of TLR on the independent variables of the study. The F scores are all significant, and the regression in model 2 and model 3, explained more of the variations in the dependent variable (TLR) than the residual.

Table 7 Coefficients (Equation 4)

Model		Unstandardized Coefficients		Std Coeff	t	Sig.
		B	Std. Err.	Beta		
1	(Constant)	3.846	0.111		34.606	.000
	FOP	-0.275	0.034	-0.307	-8.094	.000
2	(Constant)	0.584	0.143		4.093	.000
	FOP	-0.079	0.024	-0.087	-3.232	.001
	BDD	0.83	0.031	0.731	26.995	.000
3	(Constant)	2	0.243		8.243	.000
	FOP	-0.606	0.078	-0.675	-7.761	.000
	BDD	0.436	0.063	0.384	6.919	.000
	FOPBDD	0.154	0.022	0.612	7.081	.000

a Dependent Variable: TLR

Table 7 presents the results of hierarchical moderated regression analysis of timely loss recognition on fraud opportunity (FOP), board diligence (BDD) and the interaction term (FOP*BDD). Model 1 in the Table revealed that the coefficient of fraud opportunity (FOP) was negative and significant at the 1 per cent level. Model 2 showed that the coefficient of fraud opportunity was also negative while that of board diligence was positive. Model 3 showed that the coefficient of the interaction term for fraud opportunity and board diligence (FOP*BDD) was positive and statistically significant.

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Test of hypotheses

The results in Table 5 Model 1 show that fraud opportunity (FOP) has a significant negative effect on earnings persistence (ENP). This means that hypothesis 1 (which states that *the effect of fraud opportunity on earnings persistence is not statistically significant*) is rejected.

The results in Table 8, model 1, show that fraud opportunity has a significant negative effect on timely loss recognition, indicating that there is insufficient statistical evidence to support hypothesis 2 which states that *the effect of fraud opportunity on timely loss recognition is not statistically significant*.

In Table 3, Model 3, the R square change of 4.9 per cent is significant at the 1 per cent level. The statistical significance of the R square change in this model which included the interaction term, is used in determining the role of the moderator. Based on the statistical significance of the R square change, there is insufficient evidence to support the acceptance of the null hypothesis which states that *board diligence does not significantly moderate the relationship between fraud opportunity and earnings persistence.* Also the coefficient of the interaction term in Table 5 is significant, which further suggests that board diligence has significant moderating effect on the relationship between fraud opportunity and earnings persistence.

The R square change in Table 6, model 3, is significant. Also, the coefficient of the interaction term in Table 8 is significant. Therefore, hypothesis 4 which states that *board diligence does not significantly moderate the relationship between fraud opportunity and timely loss recognition* is not supported.

Discussion of findings

Results from the test of hypothesis 1 shows that fraud opportunity has a significant effect of earnings persistence. Table 5 shows that the coefficient of fraud opportunity is negative, implying that the effect of fraud opportunity on earnings persistence is negative and significant. Results from the test of hypothesis 2 also shows that fraud opportunity has a negative and significant effect on timely loss recognition. These results show that fraud opportunity has a negative effect on earnings quality. Prior studies have shown that fraud risk factors such as opportunity and pressure are associated with fraudulent financial statements (Nugroho & Diyanty, 2022; Okafor & Egbunike, 2023). This finding of the current study is reasonable as fraud opportunity thrives in environments where control mechanisms are weak, and the board monitoring system is not effective. In such environments, financial report manipulation is relatively easy. When such manipulations are done, the reported earnings numbers become unreliable.

Results from test of hypothesis 3 show that board diligence moderates the negative relationship between fraud opportunity (FOP) and earnings persistence (ENP) as the coefficient of the interaction term in Table 5 is statistically significant and the R square change in the model summary (Table 3) is also significant. Similarly, results from test of hypothesis 4 show that board diligence moderates the negative relationship between fraud opportunity (FOP) and timely loss recognition (TLR) as the coefficient of the interaction term in Table 8 is statistically significant and the R square change in the model summary (Table 6) is also significant. The coefficients of the interaction terms in both Table 5 and Table 8 are positive. These results are consistent with the fact that board diligence is positively and significantly associated with earnings persistence, and with timely loss recognition. On the other hand, board diligence is negatively associated with fraud opportunity. These results suggest that board diligence positively moderates the relationship between fraud opportunity and earnings persistence, and between fraud opportunity and timely loss recognition, by reducing the negative relationship. Board diligence achieves this by exerting a negative effect on fraud opportunity.

Conclusion and Recommendations

This study investigated the effect of a fraud risk factor - opportunity - on earnings quality. To distinguish the opportunity in this study from the ordinary meaning of opportunity, the study used the construct, fraud opportunity. The study also investigated the moderating role of board diligence on the relationship between fraud opportunity and earnings quality, using data generated from experienced bank staff in 384 branches of

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listed banks in South East Nigeria. Earnings quality was proxied by earnings persistence and timely loss recognition, and fraud opportunity was measured by a collection of fraud indicators in the instrument. Results showed that fraud opportunity had a significant, negative effect on earnings persistence and timely loss recognition. Board diligence moderated the negative relationship between fraud opportunity and earnings persistence, and between fraud opportunity and timely loss recognition. The study therefore concluded that fraud opportunity degrades the quality of reported earnings but effective supervisory and monitoring role of the board through its committees, especially the audit committee, mitigates fraud opportunity and increases the quality of reported earnings.

The study recommends that board capacity to monitoring financial reporting quality should be enhanced; and the use of technology and staff training should be intensified to reduce fraud opportunity. Banks should encourage closeness between top management staff and the rest of the other staff to achieve bonding, and provide opportunity for the more senior colleagues to morally influence the more junior colleagues.

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Questionnaire on Fraud Opportunity and Earnings Quality of Listed Banks in Nigeria

Please rate the following statements on the scale of 1 to 5, where Strongly Agree (SA); Agree (A) ; Moderately Agree (MA); Disagree (D); Strongly Disagree (SD)

Sn	Items	SA	A	MA	D	SD
	Fraud Opportunity	1	2	3	4	5
1	Reconciliation of cash deposit is not done every day at close of business and as such provides opportunity for financial statement fraud					
2	Internal check sometimes fail to report misstatements found and this provides opportunity for financial statement frauds?					
3	Internal auditors' periodic checks are sometimes not thorough, and this provides opportunity for financial statement frauds					
4	External auditors' are so familiar with those preparing financial reports and rely so much on their reports, and this can create opportunity for financial statement fraud					
5	External auditors' hardly visit branches to ascertain the reliability of branch reports and this can create opportunity for financial statement fraud					

		SA	A	MA	D	SD
	Earnings persistence	5	4	3	2	1
1	The revenue of the branch is reasonably stable from one quarter to another quarter					
2	There is no fear that branch earnings will decline in the future					
3	Reported branch earnings of one year can be used to predict the earnings of the subsequent year					
4	Bank officers do not engage in teaming and lading so reported branch earnings are reliable?					
5	Earnings are not manipulated at the branch levels or in the head office					
		SA	A	MA	D	SD
	Timely loss recognition	5	4	3	2	1
1	We sometimes incur losses in our branch and we recognize them and report on them every month end to avoid misleading reports					
2	Losses incurred by customers through online withdrawals (from their accounts) not effected by them are reported and in many cases reimbursed					
3	Non-performing loans are reported at every year and classified according to CBN guidelines					
4	Overdue interest on loans and advances are promptly recognized and reported every year end					
5	Credit losses on trade receivables are provided for adequately					
		SA	A	MA	D	SD
	Board diligence	5	4	3	2	1
1	Board members attend meetings regularly and participate actively in discussions concerning the bank					
2	Audit committee set up by the board reviews the internal control system, audited accounts and the risk management systems of the bank					
3	The audit committee interfaces with the internal audit staff to guide effective conduct of the duties of the unit					
4	Reports presented to the board are acted on promptly, including punishing staff suspected of fraud					
5	Board members are accessible and are willing to listen to staff complaints					