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HOW DO FEE INCOME AND TRADING & INVESTMENT INCOME TRIGGER THE PERFORMANCE OF LISTED COMMERCIAL BANKS IN NIGERIA?

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ABSTRACT

The study focused on understanding how the performance of commercial banks listed in Nigeria is triggered by non-interest income sources such as fee income and the trading & investment income. Specifically, the study ascertained the effect extent of fee income and the Trading and Investment Income on Return on Equity of commercial Banks in Nigeria. A total of 7 licensed listed commercial banks with international capacity was sampled over a period of 12 years ranging from 2012-2023. Data were descriptively and inferentially analysed using the panel estimated generalised least square. The findings revealed that the effect of Fee Income on Return on Equity of commercial Banks in Nigeria is positive and statistically significant (p-value = 0.0000). It was further discovered that Trading and Investment Income does significantly and positively affect the Return on Equity of commercial Banks in Nigeria (p-value = 0.00000). The study therefore concluded that the significant positive relationships found between certain non-interest income streams and financial performance, especially with Return on Equity (ROE), underscore the potential for value creation through diversified revenue strategies. It was recommended that the Executive Management and Investment Strategy Teams should expand trading and investment activities with a focus on high-growth sectors and innovative financial products. Implement robust risk management practices to safeguard investments and maximize profitability. Establish a continuous feedback loop to refine strategies based on market performance data, ensuring sustained contribution to equity growth.

Key words: *Commercial Banks, Fee Income, Performance, Trading & Investment Income, Return on Equity.*

INTRODUCTION

The financial performance environment of commercial banks is usually reshaped by the integration of diverse income streams, which has an impact on metrics such as Return on Equity, Return on Assets, Net Income Margin, and the Earnings per Share. Omotosho and Adedeji, (2022) attested to this, stressing that improved financial performance measures

across Nigerian banks are positively correlated with higher non-interest revenue, according to empirical data. This strategic shift emphasizes the value of diverse revenue streams for long-term profitability and operational resilience, in line with global banking trends and regulatory changes. In order to successfully navigate Nigeria's changing banking environment, banks, regulators, and stakeholders must comprehend the complex relationship that exists between non-interest revenue and financial performance. Achieving this readily highlights on the Nigerian banks' ability to adjust and their strategic vision in the face of shifting market conditions. (Nigerian Stock Exchange, 2022).

Prior to the introduction of technology into the operations of the banking system in Nigeria, these banks have depended solely on the traditional means of financial growth which comes from interest income. With this interest income as the only source of revenue generalization, banks could not achieve a high rate of profit maximization, therefore the need for diversification which led to non-interest income as another stream of revenue. And despite its increasing relevance, the switch to non-interest income comes with a number of difficulties and complexities that need to be carefully examined and considered.

Objectives

The main objective of the study is to investigate how the performance of commercial banks listed in Nigeria is triggered by non-interest income sources such as fee income and the trading & investment income. Specifically, it:

1. ascertain whether the effect of fee income on Return on Equity of commercial Banks in Nigeria is significant.
2. determine the extent to which Trading and Investment Income affects Return on Equity of commercial Banks of Nigeria.

LITERATURE REVIEW AND HYPOTHESES FORMULATION

Fee Income and Financial performance

The financial performance of banks is influenced by fee income in several ways namely Revenue diversification, profitability, Risk management and customer relationship. However, banks must balance fee income generation with customer affordability and regulatory requirements to avoid reputational damage and ensure sustainable financial performance. Therefore, by optimizing fee income strategies and monitoring Key Performance Indicators, banks can enhance their financial performance, maintain competitive advantages and ensure long-term sustainability.

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As a non-interest income revenue source, Fee income refers to revenue generated from various fees charged to customers for services rendered. It is also important to acknowledge, that the relationship between fee income and financial performance is not universally consistent. It can be influence by factors such as industry dynamics, cost structures, and fee collection practices, can introduce nuances to this relationship. Examining the financial resilience of banks during economic downturns, Kim and Lee (2017), in their research, spotlighted the role of fee income diversification in bolstering financial resilience. Banks with a diverse range of fee income sources demonstrated greater resilience in challenging economic climates compared to those heavily reliant on interest income. A study by Das et al. (2016) shed light on this by revealing that the positive impact of fee income on profitability varied across consulting and accounting firms. Specifically, consulting firms experienced a stronger positive correlation between fee income and profitability compared to their accounting counterparts (Das et al., 2016). Beck et al (2013), in their study pinpoint fee income as a pivotal driver of profitability, highlighting its stability and predictability in contrast to interest income, which is subject to market fluctuations.

H_{o1}: *The effect of Fee Income on Return on Equity of commercial Banks in Nigeria is not significant.*

Trading/Investment and Financial performance

Depicted as revenues earned from activities related to buying and selling of financial instruments such as stocks and bonds, it is pertinent to note that the financial performance of commercial banks is influenced by trading and investment activities in several ways as: revenue generation, Risk, capital and Liquidity management respectively. The human factor plays a significant role in investment decisions, authors like Huang and Zhou (2017) explore alternative investments such as hedge funds and private equity, highlighting their diversification benefits but acknowledging higher risk profiles. Technological advancements are transforming the investment landscape, as discussed by some scholars. They focus on how financial technology (FinTech) including online platforms and robo-advisors, is democratizing access to financial services and potentially lowering investment costs.

Study conducted by Gao et al. (2017) evaluated the relationship between trading/investment and financial performance in the pharmaceutical industry. The results showed that companies with strong investment outlets, including clear decision-making processes and effective

communication channels, had significantly higher financial performance compared to those without.

H_{o2}: Trading and Investment Income does not significantly affect the Return on Equity of commercial Banks in Nigeria.

Empirical Studies

Ghorbani, Haji, Fotros, and Sarlak (2024) examined the impact of income diversification strategies on efficiency in banks admitted to the Tehran Stock Exchange between 2011 and 2021. Using data from the financial statements of banks, this research investigated the effect of income diversification strategies on efficiency. The statistical population included all banks admitted to the Tehran Stock Exchange during the period, with 10 banks selected using the targeted elimination method. The data envelopment analysis (DEA) approach was used to measure efficiency, and the autoregressive distributed lag (ARDL) model was employed to estimate the research model. The findings showed that income diversification strategies (interest and non-interest) have a positive and significant effect on the efficiency of banks in both the short and long term.

Ndungu (2023) investigated the impact of revenue diversification on the financial performance of deposit-taking SACCOs in Mombasa, Kenya. The study focused on six licensed SACCOs, analyzing data from 2018 to 2022. Secondary data, primarily from audited financial statements, were used to examine variables such as revenue diversification, liquidity, firm size, management efficiency, firm age, and financial performance. Data analysis was conducted using SPSS version 26. The findings revealed a robust positive relationship between revenue diversification and financial performance, underscoring the benefits of diversified revenue streams. The study recommended that SACCOs promote and incentivize diversification strategies to enhance financial performance and ensure long-term sustainability.

Quyen, Ha, Darsono, and Minh (2021) examined the correlation between income diversification and financial performance, considering factors such as bank size, ownership type, and the financial crisis in Vietnam. The study utilized financial data from 29 commercial banks in Vietnam, covering the period from 2005 to 2018, and employed a Generalized Method of Moments (GMM) regression. The results did not find statistical evidence of a direct effect of income diversification on financial performance. However, when considering classification factors like bank size and ownership type, the findings showed that large banks

and state-owned banks could leverage diversification strategies to enhance profitability. Additionally, income diversification was found to have a significant positive effect on financial performance during crisis periods.

Teimet (2021) assessed the relationships between revenue diversification, technical efficiency, size, and financial performance of commercial banks in Kenya. The study explored the direct effect of revenue diversification on financial performance, the mediating role of technical efficiency, the moderating role of size, and the joint effect of these variables. Adopting a longitudinal descriptive research design, the study relied on data from the Central Bank of Kenya and covered the period 2009–2018. Using the Hirschman-Herfindahl Index to measure diversification and data envelopment analysis for technical efficiency, the study employed a panel least squares fixed-effects model. The results revealed significant relationships between both interest ($\bar{R}^2 = .37$, $\beta = 6.27$, $p = .00$) and non-interest ($\bar{R}^2 = .36$, $\beta = 5.16$, $p = .00$) diversification and financial performance. Size moderated the relationship between non-interest diversification and performance ($\beta = -.68$, $p = .02$), while technical efficiency showed no mediating effect. Collectively, diversification, technical efficiency, and size significantly influenced financial performance ($\bar{R}^2 = .46$, $F(4, 416) = 8.52$, $p = .00$).

Ghazouani and Basty (2021) investigated the impact of income diversification on profitability among Tunisian banks between 2010 and 2018. The study examined banks' profitability using accounting and market measures, focusing on each category of non-interest income separately rather than as an overall measure. This approach aimed to provide clearer insights for bank managers. The empirical analysis, which used panel data, showed that diversification in income structure enhances profitability, although the effects are mixed. Results indicated that Tunisian banks' market-to-book value is highly sensitive to all types of non-interest income. Diversification improved stock market profitability, especially in large banks and under favorable macroeconomic conditions. However, only fees and commission income positively affected asset profitability, with the effect being more pronounced for large banks in deflationary environments. The study recommended that Tunisian banks diversify their income sources while controlling associated costs and improving staff skills.

Vuong and Nguyen (2020) investigated the influence of state ownership on the relationship between revenue diversification and risk in Vietnam's domestic commercial banks from 2009 to 2018. Using the Generalized Method of Moments estimation for a dynamic panel model, the study found that higher state equity in banks encourages greater risk-taking in revenue

diversification. The findings align with previous research on the positive relationship between banking risk and income diversification while providing new evidence of a trade-off between risk and return in the operational strategies of Vietnamese state-owned banks post-financial crisis.

Suu, Luu, Pho, and McAleer (2020) explored the factors affecting the net interest margin (NIM) of commercial banks in Vietnam between 2008 and 2018. Analyzing secondary data with 308 observations, the study found that operating expenses and credit risk positively impact NIM, while risk aversion, management quality, income from trading, and deposit proportions have negative impacts. The results provide actionable insights for bank management on factors influencing interest margins and suggest appropriate supervisory policies for commercial banks in Vietnam.

Ngware, Muturi, and Olweny (2019) examined the relationship between income stream diversification and financial performance in Kenyan commercial banks. The study targeted 43 licensed commercial banks, analyzing unbalanced secondary panel data from 2002 to 2017. Using fixed effects, random effects, and Generalized Method of Moments estimation for short-run models, the findings revealed a significantly positive association between income stream diversification and financial performance. The study underscores the strategic advantage of diversified income streams in enhancing bank profitability.

MATERIALS AND METHOD

Using the *ex-post-facto* research design with focus on the Nigerian banking industry. The study purposely sampled eight (7) commercial banks listed in the Nigerian Exchange Group (NGX) with international license, obtaining its financial data for the years from 2012 being the year of Adoption of International Financial Reporting Standard (IFRS) to 2023, covering consecutively the analysis of 12years financial statements. These banks include Access Bank, Fidelity Bank, First City Monument Bank, First Bank of Nigeria, Guaranty Trust Bank, Union Bank of Nigeria, United Bank of Africa, and Zenith Bank plc.

The Independent variables of the study (Non-Interest Income) was measured with fee income and Trading and Investment income while the dependent variable (financial performance) was proxied with Return on Equity.

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The functional relationship is first stated then followed by the econometric equations as stated below: The functional representation of the models is summarized below.

ROE = f (FIE, TIT) ……..…. Eqn 1.

For the purpose of estimation, the models are restated econometrically to incorporate the error terms, as follows:

$ROE_{it} = \beta_0 + \beta_1 FIE_{it} + \beta_2 TIT_{it} + U_{it}$ ……Eqn 2.

The priori expectation is that there is a positive relationship between income fee and Return on Asset

Where:

ROE = Return on Equity.

FIE = Fee Income

TIT = Trading and Investment

i = Number of banks

t = Period covered in the investigation

α, β, Ÿ = Constant regression coefficients

u = Error term

Data were descriptively and inferentially analysed using the panel estimated generalised least square. The E-VIEWs Statistical software was used for the analysis because it is a popular software specifically designed for econometric analysis and techniques.

The decision rule for the panel estimated generalised least square is as follows: If the p-value < 0.05, reject the null hypothesis (Ho), otherwise, accept the null hypothesis.

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ANALYSES AND RESULTS DISCUSSION

Descriptive Analysis of Data

Table 1 Descriptive Analysis

	ROE	FIE	TIT
Mean	0.151310	56306072	32665371
Median	0.140531	47116000	347000.0
Maximum	0.475046	226,000,000	597,000,000
Minimum	0.0000805	0.000000	0.000000
Std. Dev.	0.093014	45310867	96662776
Skewness	0.769638	1.220832	4.664387
Kurtosis	3.841581	4.802116	25.70406
Jarque-Bera	9.874068	29.54666	1933.022
Probability	0.007176	0.000000	0.000000
Sum	11.65086	4.34E+09	2.52E+09
Sum Sq. Dev.	0.657526	1.56E+17	7.10E+17
Observations	77	77	77

Source: Eviews 10 Output (2024).

The **Return on Equity (ROE)** has a mean of 0.151310, which indicates that, on average, the banks in the study generated a return of approximately 15.13% on their equity. The maximum value of 0.475046 shows that, at its peak, some banks achieved returns as high as 47.5% on their equity, while the minimum value of 0.0000805 indicates a very low return, almost negligible, for some banks. The standard deviation of 0.093014 suggests a moderate level of variation in the returns on equity across the banks. The positive skewness of 0.769638 means the data distribution is somewhat right-skewed, with a longer tail on the higher end of ROE values. The kurtosis of 3.841581 suggests the distribution of ROE is close to normal but with a slightly peaked center. The probability of the Jarque-Bera test for normality is 0.007176, which is statistically significant, indicating that the distribution of ROE is not perfectly normal.

The Fee Income (FIE) has a mean of 56,306,072, which represents the average fee income generated by the commercial banks in the study. The maximum value of 226,000,000 reflects a substantial peak in fee income for some banks, while the minimum value of 0 shows that some banks reported no fee income at all. The standard deviation of 45,310,867 indicates a high level of variability, suggesting that there is significant divergence in the fee income generated by different banks. The skewness of 1.220832 shows a positive skew, meaning that the majority of banks have lower fee income, with a few banks having very high values. The kurtosis of 4.802116 suggests that the distribution is moderately peaked, with a tendency to show extreme values more frequently than a normal distribution. The probability of the

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Jarque-Bera test is 0.000000, indicating a significant departure from normality in the distribution of fee income.

The Trading and Investment Income (TIT) has a mean of 32,665,371, reflecting the average income banks earned from trading and investments. The maximum value of 597,000,000 shows the large potential for trading and investment income in some banks, while the minimum value of 0 shows that some banks had no trading or investment income during the period. The standard deviation of 96,662,776 indicates high variability in trading and investment income, with some banks significantly outperforming others in this category. The skewness of 4.664387 is highly positive, suggesting a strong rightward skew in the distribution, where a small number of banks generate very high trading and investment income while the majority have lower levels. The kurtosis of 25.70406 is extremely high, indicating a highly leptokurtic distribution with extreme outliers. The Jarque-Bera probability is 0.000000, confirming that the distribution of trading and investment income is far from normal.

Test of Hypotheses

Table 2 Test of ROE Model
Dependent Variable: ROE
Method: Panel EGLS (Cross-section weights)
Date: 01/22/25 Time: 11:59
Sample: 2013 2023
Periods included: 11
Cross-sections included: 7
Total panel (balanced) observations: 77
Linear estimation after one-step weighting matrix
White cross-section standard errors & covariance (d.f. corrected)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
FIE	9.18E-10	1.56E-10	5.893448	0.0000
TIT	3.96E-10	2.32E-11	17.08185	0.0000
C	0.088607	0.006692	13.24077	0.0000

Weighted Statistics			
R-squared	0.677008	Mean dependent var	0.196778
Adjusted R-squared	0.659064	S.D. dependent var	0.154992
S.E. of regression	0.070748	Sum squared resid	0.360385
F-statistic	37.72888	Durbin-Watson stat	1.863665
Prob(F-statistic)	0.000000		

Source: Eviews 10 Output (2024)

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Hypothesis One

H_o: The effect of Fee Income on Return on Equity of commercial Banks in Nigeria is not significant.

H_i: The effect of Fee Income on Return on Equity of commercial Banks in Nigeria is significant.

Table 2 indicates that the model of the study includes two independent variables: Fee Income (FIE), and Trading & Investment Income (TIT). The Adjusted R-squared is 0.659064, meaning that the model explains approximately 65.91% of the variation in ROE. This indicates a good explanatory power of the model. The F-statistic has a p-value of 0.000000, confirming that the overall model is statistically significant at the 5% level.

The coefficient of FIE 9.18E-10 (p-value = 0.0000). This suggests that for every unit increase in Fee Income, the Return on Equity (ROE) increases by 9.18E-10 units. The positive sign indicates that Fee Income has a positive effect on ROE. The p-value of 0.0000 indicates that this effect is statistically significant at the 5% level. And since, the p-value of 0.0000 is less than 0.05 significance level, we accept the alternate hypothesis (Hi), and we conclude that the effect of Fee Income on Return on Equity of commercial Banks in Nigeria is positive and statistically significant. (p-value = 0.0000).

The positive effect may reflect the growing importance of non-interest income in Nigerian banks, as fee-based income from services like insurance, wealth management, and advisory services can provide a stable revenue stream, enhancing profitability and equity returns.
Studies like Amahalu et al. (2023) found a positive relationship between diversification in non-interest income sources, including fees, and bank performance in Nigeria. Obadiaru and Ogunyemi (2024) similarly found that non-interest income has a significant effect on profitability in Nigeria, supporting the positive effect of Fee Income on ROE. Additionally, Uniamikogbo et al. (2021) highlighted that commission income positively impacts the financial performance of Nigerian banks, aligning with this finding. Abu, Awad, and Ellis (2024) also reported a positive correlation between non-interest income and profitability in MENA banks, suggesting that Fee Income could be an important driver of profitability in emerging market banks.

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Hypothesis Two

H_o: Trading and Investment Income does not significantly affect the Return on Equity of commercial Banks in Nigeria.

H_i: Trading and Investment Income does significantly affect the Return on Equity of commercial Banks in Nigeria.

Table 2 indicates that the model of the study includes two independent variables: Fee Income (FIE), and Trading & Investment Income (TIT). The Adjusted R-squared is 0.659064, meaning that the model explains approximately 65.91% of the variation in ROE. This indicates a good explanatory power of the model. The F-statistic has a p-value of 0.000000, confirming that the overall model is statistically significant at the 5% level. The coefficient of 3.96E-10 (p-value = 0.0000). This suggests that for every unit increase in Trading and Investment Income, ROE increases by 3.96E-10 units. The positive sign indicates that Trading and Investment Income also has a positive effect on ROE. The p-value of 0.0000 confirms that this effect is statistically significant at the 5% level.

Since, the p-value of 0.00000 is less than 0.05 significance level, we accept the alternate hypothesis (Ho), indicating that Trading and Investment Income does significantly and positively affect the Return on Equity of commercial Banks in Nigeria.. (p-value = 0.00000).

This indicates that banks with higher Trading and Investment Income are likely to have higher returns on equity. The significance of this result may reflect the strong contribution of trading activities, especially in a dynamic market where investment returns can greatly enhance bank profitability and shareholder value. Several studies support this positive relationship. Uddin et al. (2022) found a positive link between income diversification, including trading income, and profitability in Bangladeshi banks. Obadiaru and Ogunyemi (2024) similarly noted the impact of non-interest income on Nigerian banks' profitability, suggesting that investment income could significantly enhance performance. Ndungu (2023) also observed that revenue diversification, including investment income, positively impacted SACCO performance in Kenya. Hao et al. (2020) emphasized the role of non-interest income, including trading profits, in improving profitability in Vietnamese banks, supporting the significance of Trading and Investment Income for banks' returns.

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CONCLUSION AND RECOMMENDATIONS

The significant and positive relationships found between certain non-interest income streams and financial performance, especially with Return on Equity (ROE), underscore the potential for value creation through diversified revenue strategies. These results reflect the importance of leveraging financial innovation, customer-centric services, and market opportunities to enhance profitability. However, the strength of these relationships also emphasizes the need for banks to align their non-interest income activities with their strategic goals, operational capacity, and market positioning..

Based on these, it was recommended that:

a. Executive Board and Revenue Optimization Committees should leverage the positive relationship between fee income and equity returns by scaling up fee-based service offerings, introduce premium services that cater to high-net-worth clients and ensure that fee-based revenue streams are strategically aligned with the bank's equity enhancement goals.
b. Executive Management and Investment Strategy Teams should expand trading and investment activities with a focus on high-growth sectors and innovative financial products. Implement robust risk management practices to safeguard investments and maximize profitability. Establish a continuous feedback loop to refine strategies based on market performance data, ensuring sustained contribution to equity growth.

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