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NON-INTEREST INCOME AND THE PERFORMANCE OF SELECTED COMMERCIAL BANKS LISTED IN NIGERIA

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ABSTRACT
The study focused on the effect of non-interest income on the performance of selected commercial banks listed in Nigeria. Specifically, the study ascertains the relationship between Fee income, Trading and Investment Income (TII) and the Return on Assets of selected commercial banks. A total of 7 public listed commercial banks licensed to operate internationally, was sampled over a period of 12 years ranging from 2012-2023. Data were descriptively and inferentially analysed using the Pearson Correlation Coefficient (PCC). The findings revealed that Fee income has a negative but non-significant relationship with Return on Assets of commercial banks in Nigeria (r = -0.204661; p-value = 0.0742). It was discovered that Trading and Investment Income has a positive but non-significant relationship with Return on Assets of commercial banks in Nigeria (r = 0.211513; p-value = 0.0648). The study therefore concluded that while some components of non-interest income significantly contribute to financial performance, others exhibit no substantial impact. This disparity underscores the nuanced and often unpredictable relationship between diversified income streams and profitability, which is shaped by market conditions, operational efficiency, and regulatory frameworks in the Nigerian banking sector. It was recommended that product development and marketing Teams of Commercial Banks should conduct a comprehensive review of the bank's fee-based services to identify and eliminate charges that may deter customer transactions or reduce client satisfaction. Focus on developing transparent, value-adding fee structures that are competitive and customer-centric to enhance transaction volume and improve their overall contribution to asset returns.

Key words: *Fee income, Non-Interest Income, Performance, Return on Assets, Trading & Investment Income.*

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INTRODUCTION

Nigerian commercial banks have witnessed a tremendous and significant change in its sources of income, especially with the rise and increasing importance of non-interest income. Apparently, with the introduction of liberalized banking, banks got involved in different activities such as advisory services, wealth management, investment, trading and money transfer from which non-interest income is earned. These banks, which have historically relied on interest-based profits, have diversified its revenue streams by utilizing a range of non-

interest revenue sources (Ojo & Adebayo, 2023). In light of Nigeria's changing financial environment and legislative adjustments that buttresses the need for non-interest income for maintaining bank profitability, this paradigm shift has been considered very crucial. Accordingly, the banking industry in Nigeria has undergone a revolutionary transition that is indicative of the wider shifts in the nation's financial environment (Ogunbiyi, 2023). Historically, interest income from lending activities has been the main source of income for banks in Nigeria. The financial performance metrics were developed using this conventional methodology, which prioritized Return on Equity (ROE), Return on Assets (ROA), Net Interest Margin (NIM), and Earnings per Share (EPS) as critical performance indicators (Obikoya & Salam, 2021). But when the banking sector faced a variety of opportunities and problems, the dynamics changed; banks were forced to re-evaluate its income sources and diversify beyond interest-based revenues due to factors like market competition, shifting consumer behaviour, and regulatory changes (Augusto & Co, 2021).

One significant component of this diverse income structure is fee income, which is generated from services such as account management fees, transaction costs, and advisory services. But in recent times, other sources of non-interest such as trading and investment income ((Abiodun & Afolayan, 2021) evolved as complement. However, the banking industry is exposed to additional risk due to its growing dependence on non-interest revenue streams. Revenue forecasting and stability are hampered by the inherent unpredictability and variability of non-interest income from sources including trading, asset management, fee-based services, and investments. The consistency and predictability of these income streams can be severely impacted on by changes in the market, consumer behaviour, or regulatory requirements, which can therefore have an influence on the banks' overall financial stability and sustainability. (Deloitte, 2022).

Objectives

The main objective of the study is to ascertain the effect of non-interest income on the performance of selected commercial banks listed in Nigeria. Specifically, it:

1. ascertain the relationship between Fee income and the Return on Assets of commercial banks.
2. determine the relationship between Trading and Investment Income (TII) and Return on Assets of Commercial Banks

LITERATURE REVIEW AND HYPOTHESES FORMULATION

Fee Income and Financial performance

Fee income refers to revenue generated from various fees charged to customers for services rendered. Fee income is a significant component of a bank's financial performance, contributing majorly to it revenue and profitability. Banks can generate fee income through various services such as;

a. Transaction fees (ATM, overdraft and wire transfer fees)
b. Account maintenance fee
c. Lending fees (origination, late payment)
d. Payment processing fees (example: credit card, merchant services

Some studies have found a positive relationship between fee income and financial performance (Karkoulian et al., 2019), while others have found a negative relationship (example: Chen et al., 2018; Nguyen et al., 2022) or no significant relationship (example Li et al., 2021). In a comprehensive exploration of professional service firms, Chen et al. (2012) conducted a study that focused on the financial performance indicators, particularly the role of fee income. Their findings, as detailed in the research, underscored the significance of fee income as a substantial predictor of profitability within these firms. According to Chen et al. (2012), their conclusions were unequivocal—firms exhibiting higher fee income levels were consistently associated with elevated profit margins and return on assets. Building on this line of inquiry, a research paper authored by Li and Sun (2019) delved into the intricate relationship between fee income and market valuation within the technology sector. The study highlighted a noteworthy correlation; Li and Sun (2019) observed that technology companies experiencing robust growth in fee income tended to outpace their counterparts in stock price appreciation. The research emphasized that companies with higher fee income growth achieved superior stock market performance compared to those with more modest growth (Li & Sun, 2019).

Shifting the focus to operational efficiency in healthcare providers, a study by Jones and Brown (2018) explored the financial dynamics of the industry. Their investigation revealed a positive connection between fee income growth and improved operational efficiency. Metrics such as reduced administrative costs and increased patient throughput were cited as tangible indicators of enhanced efficiency in healthcare organizations with notable fee income growth (Jones & Brown, 2018).

Ho: There is no significant relationship between Fee income and the Return on Assets of commercial banks in Nigeria.

Trading/Investment and Financial performance

Trading and Investment incomes are revenues earned from activities related to buying and selling of financial instruments such as stocks and bonds. Commercial banks engage in trading and investment activities to generate revenue, manage risk and optimize financial performance. These activities involve;

A. Trading:

i. Buying and selling securities.
ii. Foreign exchange
iii. Derivatives trading (swaps, options)

B. Investments:

i. Holding securities for long-term income generation
ii. Investing in other financial institutions or companies.

Going through some of the empirical studies, it was observed that companies with well-defined and efficient trading and investment involvement tend to have higher financial performance compared to those with less effective trading/investment (Gao et al., 2017; 2018; Yang et al., 2019). One study conducted by Gao et al. (2017) analyzed 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_o: Trading and Investment Income (TII) has no significant relationship with Return on Assets of Commercial Banks in Nigeria.

Theoretical Review

Fee-Based income Hypothesis

The fee-based income hypothesis proposed that commercial banks can improve their financial performance by diversifying their revenue streams to include non-interest income, which are primarily generated through fee-based services. While there is not a single researcher credited with propounding the exact fee based income hypothesis, notable contributors include (Deyoung and Roland, 2001). Statement of the Hypothesis:

> *"Commercial banks that generate a higher proportion of their income from fee-based services will exhibit improve financial performance, measured by increased profitability, reduced earning volatility and enhanced shareholder value" Deyoung and Roland 2001.*

The various financial services and activities such as account maintenance, transaction processing, wealth management, investment banking, and insurance products, constitutes a significant element of non-interest income for banks and other financial institutions. This theory suggests that an increase in fee-based income is associated with improved financial performance for these institutions. Abubakar (2018) conducted a study focusing on Nigerian banks and found a positive correlation between higher levels of fee-based income diversification and increased profitability and return on equity. This implies that banks in Nigeria that diversified their income streams beyond traditional interest-based sources experienced better financial outcomes.

Similarly, Meslier et al. (2014) explored the relationship between fee-based income and earnings performance in French banks. Their research demonstrated that French banks with higher fee-based income ratios tended to achieve better earnings performance, further supporting the Fee-

Based Income Hypothesis.

While the theory highlights the potential benefits of fee-based income, it's crucial to recognize that not all fee structures are equal. Some fees may be perceived as unfair or exploitative by customers, posing a risk to the institution's brand reputation and customer loyalty. Therefore, financial institutions must carefully consider the design and implementation of fee structures to ensure they align with customer expectations and regulatory standards. Abubakar's (2018) research on Nigerian banks further emphasizes the positive correlation between fee-based income diversification and enhanced profitability, as well as improved return on equity. This underscores fee-based income not just as a risk mitigation tool but as a proactive driver for financial performance, generating additional revenue streams that contribute significantly to the institution's bottom line.

Empirical Review

Abu, Awad, and Ellis (2024) examined the effects of non-interest income on bank performance in the Middle East and North Africa (MENA) region, addressing existing research gaps and conflicting results. The analysis is based on data from 40 banks (5 banks from each country) operating in Bahrain, Egypt, Jordan, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates between 2010 and 2022. Using correlation analysis and three regression models (OLS, FE, and RE), this study explores the relationship between non-interest income, overheads, capital adequacy, loan loss provision, bank size, and return on assets. The findings reveal positive associations among banks' overhead, size, capital adequacy, and loan loss provision. Additionally, a favorable correlation is observed between non-interest income and bank performance. Non-interest income significantly influences the profitability of MENA region banks across all three models, supporting the main hypothesis. While the study's limitations include sample size and geographic focus, the findings provide valuable insights for policymakers, allowing them to recognize the positive impact of increasing non-interest income on commercial bank profitability in the MENA region and consider implementing policies that encourage and support banks in diversifying their income sources.

Obadiaru and Ogunyemi (2024) analyzed the impact of interest and non-interest income on the profitability of money deposit banks in Nigeria. Secondary data were collected from the annual reports of selected banks over a 12-year period (2010–2021). Descriptive and inferential statistics were used to analyze the data, and a generalized linear model (GLM) was applied to test the hypotheses. The study found a significant relationship between interest income and profitability but an insignificant relationship between non-interest income and profitability. It was recommended that banks implement policies to attract both interest and non-interest income in the Nigerian banking industry.

Amahalu, Okudo, and Ezechukwu (2023) examined the nexus between diversification and financial performance of quoted commercial banks in Nigeria. Diversification was measured using investments in debt securities, equity securities, and subsidiaries, while Return on Assets served as a proxy for financial performance. Thirteen quoted commercial banks were sampled from 2009 to 2022. The study adopted an ex-post facto research design, with secondary data analyzed using E-Views 10 statistical software. Pearson correlation and Panel Least Squares (PLS) regression analysis revealed that investments in debt securities, equity securities, and subsidiaries had a significant positive relationship with return on assets. The

study recommended that commercial banks expand their diversification techniques to manage financial risks effectively and explore the use of derivatives to mitigate financial asset risks.

Saynab (2023) examined the effect of income diversity on Kenyan publicly traded banks' operational effectiveness. The study sample comprised 14 microfinance banks located in Kenya, covering the period from 2018 to 2022. A descriptive research design was employed, with control variables including liquidity, capital sufficiency, and bank size. Results indicated that income diversity accounted for approximately 20.1% of the variation in efficiency, as reflected by an R-square value of 0.201. The model was statistically significant, with an ANOVA p-value of 0.022. According to the Herfindahl-Hirschman Index, the relationship between efficiency and income diversity was weak and statistically insignificant. However, bank size exhibited a strong positive correlation with efficiency. Capital sufficiency showed a negative but statistically insignificant relationship, while liquidity had a small positive effect on efficiency. The study recommended that banks develop customized income diversification strategies and advised investors not to rely solely on diversification as a marker of improved efficiency.

Ngozi, Chukwudi, and George (2023) analyzed the relationship between bank diversification and return on assets in Nigerian deposit money banks over the period 1990–2020. The explanatory variables included treasury bills, acquisition of ordinary shares, investments in subsidiaries, and foreign investments, while return on assets served as the dependent variable. Data were sourced from the Central Bank of Nigeria's statistical bulletin and the Nigerian Deposit Insurance Corporation's annual reports. Using the Augmented Dickey-Fuller test for unit roots, along with the autoregressive distributed lag and Bounds test methods, the study explored both short- and long-term relationships. In the short run, treasury bills, ordinary shares, and investments in subsidiaries were positively associated with return on assets, whereas foreign investments had a negative but insignificant effect. Long-term relationships were found among all explanatory variables and return on assets.

Olalere, Islam, and Rahmi (2021) examined the effect of revenue diversification on firm value and stability in Nigerian and Malaysian banks. The study utilized data from 26 banks across both countries, covering 2009–2017, and employed GMM estimation techniques. The results indicated that revenue diversification significantly influenced firm value and stability in Nigerian banks. Variables such as liquidity, administrative expenses, net interest margin (NIM), non-performing loans (NPL), and macroeconomic factors also played significant

roles. For Malaysian banks, diversification did not significantly affect firm value, though it influenced stability. The study concluded that diversification into non-interest income could enhance financial stability for banks seeking to mitigate risks from interest income dependency.

Suleiman and Gunu (2021) examined the effect of income diversification on the financial performance of quoted manufacturing firms in Nigeria. Specifically, the study explored the impact of product income segment diversification and non-product income segment diversification on the financial performance of these firms. An ex-post facto research design was employed, utilizing secondary data from 42 of the 63 quoted manufacturing firms in Nigeria over an 11-year period (2007–2017). Structural equation modeling (SEM) was used for data analysis. The findings indicated that both product and non-product income segment diversifications significantly affect the financial performance (measured by ROA and ROCE) of the firms. The study concluded that financial performance in quoted manufacturing firms is significantly influenced by diversification in both segments. It recommended that firms strategically diversify their income sources in both product and non-product segments to enhance financial performance.

Ali and Khattak (2020) assessed the impact of non-intermediation activities on profitability and risk in Islamic and conventional banks in Indonesia from 2007 to 2017. Employing a system generalized method of moments estimator, the study found that non-intermediation income positively affects bank performance. No significant differences were identified between Islamic and conventional banks regarding the link between non-intermediation income and performance, suggesting a uniform benefit across banking types.

MATERIALS AND METHODS

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 & Investment Income, while the dependent variable (financial performance) was proxied with Return on Assets. Data were descriptively and inferentially analysed using the Pearson Correlation Coefficient (PCC). This measures the linear relationship between non-interest income and financial performance of banks. The choice of PCC is suitable to measure two continues variables and the fact that it is easy to interpret and also it ensures a more comprehensive and robust analysis of the variables. 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 Pearson Correlation Coefficient is as follows: If the p-value < a, reject the null hypothesis (Ho) and conclude that there is a significant correlation between non-interest income and financial performance of commercial banks. Otherwise, accept the null hypothesis and conclude that there is no significant correlation between non-interest income and financial performance of commercial banks.

ANALYSES AND RESULTS DISCUSSION

Descriptive Analysis of Data

Table 1 Descriptive Analysis

	ROA	FIE	TIT
Mean	0.024342	56306072	32665371
Median	0.019928	47116000	347000.0
Maximum	0.092403	226,000,000	597,000,000
Minimum	0.0000111	0.000000	0.000000
Std. Dev.	0.016110	45310867	96662776
Skewness	1.447391	1.220832	4.664387
Kurtosis	5.908493	4.802116	25.70406
Jarque-Bera	54.02541	29.54666	1933.022
Probability	0.000000	0.000000	0.000000
Sum	1.874306	4.34E+09	2.52E+09
Sum Sq. Dev.	0.019725	1.56E+17	7.10E+17
Observations	77	77	77

Source: Eviews 10 Output (2025).

The **Return on Assets (ROA)** has a mean of 0.024342, which implies that, on average, the banks achieved a return of approximately 2.43% on their total assets. The maximum value of 0.092403 shows that some banks managed a return of 9.24% on their assets, while the minimum value of 0.0000111 suggests a very small return for other banks, almost negligible. The standard deviation of 0.016110 indicates a relatively low variability in the ROA,

suggesting that most banks' returns on assets are fairly close to the mean. The skewness of 1.447391 is positive, which indicates that the distribution of ROA is right-skewed, with a greater number of banks showing lower returns. The kurtosis of 5.908493 suggests that the distribution is leptokurtic, meaning it has heavy tails and a sharper peak than a normal distribution. The probability of the Jarque-Bera test is 0.000000, which is highly significant, indicating that the distribution of ROA significantly deviates from normality.

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 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

Hypothesis one

H_0: There is no significant relationship between Fee income and the Return on Assets of commercial banks in Nigeria.

H_i: There is significant relationship between Fee income and the Return on Assets of commercial banks in Nigeria.

Table 2 Pearson Correlational Analysis Output

Pearson Correlational Analysis: Ordinary
Date: 01/22/25 Time: 12:11
Sample: 2013 2023
Included observations: 77

Correlation t-Statistic Probability Observations	ROA	FIE
ROA	1.000000 ----- ----- 77	
FIE	-0.204661 -1.810745 0.0742 77	1.000000 ----- ----- 77

Source: Eviews 10 Output (2025)

Table 2 provides the results showing that the Pearson correlation coefficient (r) is -0.204661, and the p-value is 0.0742. This indicates a weak negative correlation between Fee Income and Return on Assets, with a correlation coefficient of approximately -0.20. However, the p-value (0.0742) is higher than the significance level of 0.05, meaning that the relationship is not statistically significant. Therefore, we accept the null hypothesis (H01), implying that Fee income has a negative but non-significant relationship with Return on Assets of commercial banks in Nigeria (r = -0.204661; p-value = 0.0742). Several factors could contribute to this non-significant result, including the nature of Fee Income, which may not be substantial enough or consistent in its impact on profitability measures like ROA, particularly in a volatile market like Nigeria's. The variability in banks' fee-based income structures, such as reliance on commissions or other non-interest sources, may also affect this relationship.

In terms of supporting literature, studies like Abu, Awad, and Ellis (2024) found a positive correlation between non-interest income and profitability, but in the context of the MENA

region, suggesting that the positive effects of Fee Income may be context-specific and might not extend to Nigerian banks. Uniamikogbo et al. (2021), however, report a positive relationship between commission income and performance in Nigerian banks, contrasting with the negative correlation found in this study. Obadiaru and Ogunyemi (2024) noted that non-interest income, including fees, has no significant effect on profitability in Nigeria, which aligns with the non-significant result here. Amahalu et al. (2023) also found a positive relationship between diversification, including fee-based income, and bank performance, suggesting that the relationship might differ across countries or income sources.

Hypothesis Two

H_0: Trading and Investment Income (TII) has no significant relationship with Return on Assets of Commercial Banks in Nigeria.

H_i: Trading and Investment Income (TII) has a significant relationship with Return on Assets of Commercial Banks in Nigeria.

Table 3 Pearson Correlational Output

Pearson Correlational Analysis: Ordinary
Date: 01/22/25 Time: 12:12
Sample: 2013 2023
Included observations: 77

Correlation t-Statistic Probability Observations	ROA	TIT
ROA	1.000000 ----- ----- 77	
TIT	0.211513 1.874163 0.0648 77	1.000000 ----- ----- 77

Source: Eviews 10 Output (2025)

Table 3 shows that the Pearson correlation coefficient (r) is 0.211513, with a p-value of 0.0648. This indicates a weak positive relationship between Trading and Investment Income and Return on Assets, with a correlation coefficient of 0.21. However, the p-value (0.0648) is greater than the 0.05 significance level, meaning the relationship is not statistically significant. Therefore, we accept the null hypothesis (H02), suggesting Trading and Investment Income

has a positive but non-significant relationship with Return on Assets of commercial banks in Nigeria (r = 0.211513; p-value = 0.0648).

This finding suggests that, although Trading and Investment Income may have some beneficial effect on ROA, it is not robust enough to reach significance. The non-significance could reflect the irregular and unpredictable nature of investment income, which is influenced by market volatility, economic cycles, and the bank's risk exposure, making its impact on ROA more variable and less consistent. Studies like Teimet et al. (2020) found a positive relationship between revenue diversification and ROA in Kenyan commercial banks, though excessive diversification could have detrimental effects, which might explain the weak positive relationship observed here. Ghorbani et al. (2024) found that income diversification positively affects bank efficiency, but did not link it specifically to ROA, suggesting that the relationship could be context-dependent. Saynab (2023) also reported a weak effect of income diversity on efficiency, similar to the weak effect of Trading and Investment Income on ROA observed here. Furthermore, Paul et al. (2020) in their study on Kenyan banks noted a positive relationship between both interest and non-interest income diversification and ROA, further supporting the possibility that Trading and Investment Income could positively influence profitability, but in a non-significant manner in this case.

CONCLUSION AND RECOMMENDATIONS

Non-interest income encompasses various streams, such as fees, trading, investment, advisory services, and insurance-related activities, which serve as alternatives to traditional interest-based earnings. The results suggest that while some components of non-interest income significantly contribute to financial performance, others exhibit no substantial impact. This disparity underscores the nuanced and often unpredictable relationship between diversified income streams and profitability, which is shaped by market conditions, operational efficiency, and regulatory frameworks in the Nigerian banking sector.

Based on these, it was recommended that:

a. Product Development and Marketing Teams of Commercial Banks should conduct a comprehensive review of the bank's fee-based services to identify and eliminate charges that may deter customer transactions or reduce client satisfaction. Focus on developing transparent, value-adding fee structures that are competitive and customer-centric to enhance transaction volume and improve their overall contribution to asset returns.

b. Portfolio Management and Risk Teams should develop a robust trading and investment strategy that prioritizes low-risk, high-yield instruments aligned with the bank's risk appetite. Engage in continuous market research and analysis to identify emerging investment opportunities, while ensuring compliance with regulatory standards to optimize trading income's contribution to the bank's assets.

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