

Effect of Non-Interest Income on Performance of Deposit Money Banks in Nigeria**Olorunmola, Emmanuel Glory¹ & Prof. Ikechukwu .I. Okpe²****Abstract**

The study conducted empirical analysis to examine the effect of non-interest income on the performance of Deposit Money Banks (DMBs) in Nigeria from 2013 to 2022. Specifically, it investigated the effects of Dividend Income, Rental Income, Foreign Exchange Income, Fixed Income Securities, and Foreign Currency Revaluation Income on the Profit for the Year of deposit money banks in Nigeria. The study selected nine DMBs listed on the Nigeria Exchange Group during the period and analyzed time series data from their annual audited financial statements using various statistical tools. In particular, Panel Data Regression Analysis was used to test the five null hypotheses formulated for the study. Results of the analysis suggested that Dividend income, Fixed income securities and Foreign Currency Revaluation Income had positive and significant effect on profit for the year of the sampled deposit money banks in Nigeria during the period under review with coefficient: 0.689884; P-Value: 0.0000, coefficient: 0.162996; P-Value: 0.0005 and coefficient: 0.092439; P-Value: 0.0122 respectively. While rental income and foreign exchange income had positive and non-significant effect on profit for the year of the sampled deposit money banks in Nigeria during the period under review with Coefficient: 0.095541; P-Value: 0.3267 and coefficient: 0.089419; P-Value: 0.1832. The implication of these findings suggested that non-interest income served as a valuable tool for improving profitability and risk mitigation in the banking sector in Nigeria. Based on these findings and the implications, the study recommended that: (i) Deposit money banks (DMBs) in Nigeria should increase profitability by investing in shares of quoted firms, the dividends from such investments would significantly boost the banks' profitability. (ii) The banks would also enhance its profitability by engaging in real estate's investments to generate rental incomes. Given that real estate was a viable investment in the country, it had the potential to significantly increase the profitability of the firms. (iii) The deposit money banks should increase profitability by trading in foreign exchange. The presence of a thriving foreign exchange market in Nigeria would contribute to the growth of profitability for the banks. (iv) The banking institutions should equally invest in fixed income securities such as bonds or treasury bills, underwriting and issuance fees and so on to banks' profitability. However, if bank actively trade Government bonds for gains or participate in underwriting new Government bond issuances, it contributes to non-interest income. Hence, the study concluded that deposit money banks should increase their stock of foreign currencies, to enable them benefit from the profit arising from foreign currency revaluations.

Keywords: Non-Interest Income, dividend income, rental income, foreign exchange income, fixed income securities, foreign currency revaluation, Performance

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Introduction

The banking sector has witnessed a significant shift from traditional interest-based revenue toward non-interest income sources, driven by financial liberalization, globalization, technological advancement, and regulatory pressures (Kumar et al., 2019; Mehzabin et al., 2022). Non-interest income comprises diverse revenue streams including fees, commissions, foreign exchange income, dividend income, rental income, fixed income securities, and foreign currency revaluation income (Soye & Agboola, 2019). Banks levy these fees to secure revenue and maintain liquidity, especially during periods of heightened default rates, while technological innovations such as automated teller machines, mobile apps, and point-of-sale devices have further expanded non-interest income channels (Baskaran et al., 2019).

For Nigerian deposit money banks (DMBs), economic downturns have constrained credit collection and compressed interest margins, compelling banks to diversify revenue beyond conventional lending (Mulchandani et al., 2021). Consequently, DMBs have increasingly embraced non-interest activities including investment provision, foreign exchange transactions, brokerage services, stock trading, electronic banking, and underwriting (Mahmood et al., 2020; Minha & Thanh, 2020). While diversification into non-interest income is theoretically expected to reduce earnings volatility and improve financial stability (Dhungel, 2020), evidence suggests its marginal contribution may decline over time due to rising operating costs (Abedifar, et al., 2017).

The five key non-interest income components examined in this study are: dividend income which are earnings from shareholdings in other companies that reduce reliance on interest-based revenue (Ponaka, 2022); rental income, which are stable, predictable returns from real estate holdings that cushion banks against market volatility (Puspitasari et al., 2021); foreign exchange income are the revenue from currency trading and transaction services, though it exposes banks to transaction, translation, and economic risks (Takou et al., 2016); fixed income securities which are low-risk instruments such as government bonds and Treasury bills that provide stable returns while reducing portfolio risk (Ndum, 2022); and foreign currency revaluation income which include accounting gains or losses from exchange rate movements on foreign-denominated assets and liabilities (Nguyen, 2020). The outcome variable, financial performance, is measured by profit for the year, net earnings after all taxes and expenses, which reflects management efficiency, growth capacity and shareholder value (Alubisia et al., 2018; Shah et al., 2018; Sutomo and Budiharjo, 2019).

This study is theoretically anchored on Portfolio Theory (Markowitz, 1952), which holds that diversifying income streams across uncorrelated sources reduces overall risk and improves financial performance. Applied to banking, DMBs that diversify into non-interest activities can reduce income volatility, absorb information asymmetry through cross-selling, and cushion against cyclical variations in interest revenue (Sanyaolu et al., 2019; Sattar et al., 2019; Simanjuntak & Suriyawinata, 2020). This is complemented by the Risk Management Theory (Bernoulli, 1938), which provides a framework for understanding how each non-interest income component helps banks identify, assess, and manage risks to ensure financial stability.

Empirically, evidence on this relationship is mixed and context-dependent. Antao and Karnik (2022), studying 24 Asian countries from 1996 to 2018 using the Generalised Method of Moments, found that non-interest income increased bank risk across all country groups. Conversely, Uddin et al. (2021), examining 32 Bangladeshi banks from 2007 to 2016, found a significant positive association between income diversification and bank profitability. These contrasting findings across regions underscore the need for a Nigeria-specific investigation, as the peculiarities of the Nigerian banking environment, including exchange rate volatility, regulatory dynamics, and economic cycles, may produce distinct outcomes.

Against this background, this study investigates the effect of non-interest income components on the financial performance of DMBs in Nigeria. The null hypotheses guiding the study are that dividend income, rental income, foreign exchange income, fixed income securities, and foreign currency revaluation income each have no significant effect on the financial performance of DMBs in Nigeria.

Methodology

The study adopted an *ex-post facto* research design, utilizing historical financial data extracted from the annual reports and audited financial statements of nine DMBs listed on the Nigeria Exchange Group (NGX) over the period 2013 to 2022, yielding a balanced panel of 90 observations. The nine sampled banks are First City Monument Bank, First Bank Nigeria Plc, United Bank for Africa, Access Bank Nigeria Plc, Sterling Bank Nigeria Plc, Citibank, Wema Bank Nigeria Plc, Unity Bank Nigeria Plc, and Union Bank Nigeria Plc. were selected from a population of 22 quoted DMBs using stratified random sampling. The year 2013 was chosen as the base year to capture the post-financial crisis era and ensure a decade-long analysis.

The study estimated the following panel regression model:

$$\text{LnPFY}_t = \beta_0 + \beta_1(\text{LnDVDI})_{t-1} + \beta_2(\text{LnRTLl})_t + \beta_3(\text{LnFEXI})_t + \beta_4(\text{LnFINS})_t + \beta_5(\text{LnFCRI})_t + \epsilon$$

Where:

LnPFY is the natural log of profit for the year;

LnDVDI is the lagged natural log of dividend income;

LnRTLl, LnFEXI, LnFINS, and LnFCRI are the natural logs of rental income, foreign exchange income, fixed income securities, and foreign currency revaluation income respectively;

β_0 – β_5 are regression coefficients; and

ϵ is the error term.

Natural logarithm transformation was applied to enhance robustness and interpretability of the model. Preliminary analyses included descriptive statistics, Jarque-Bera normality tests, skewness, kurtosis, and the PP-Fisher Chi-Square panel unit root test. The main analysis employed Panel Least Squares regression and Pearson correlation. The decision rule was set at $\alpha = 0.05$.

Results and Discussion

Regression Results

Table 1: Panel Least Squares Regression Results (Dependent Variable: LnPFY)

Dependent Variable: PFY
 Method: Panel Least Squares
 Date: 10/10/23 Time: 02:05
 Sample: 2013 2022
 Periods included: 10
 Cross-sections included: 9
 Total panel (balanced) observations: 90

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|--------------------|-------------|-----------------------|-------------|----------|
| DVDI | 0.689884 | 0.103335 | 6.676182 | 0.0000 |
| RTL1 | 0.095541 | 0.096837 | 0.986616 | 0.3267 |
| FEXI | 0.089419 | 0.066633 | 1.341959 | 0.1832 |
| FINS | 0.162996 | 0.044850 | 3.634210 | 0.0005 |
| FCRI | 0.092439 | 0.036080 | 2.562067 | 0.0122 |
| C | 3.054988 | 0.813473 | 3.755490 | 0.0003 |
| R-squared | 0.519305 | Mean dependent var | | 9.775991 |
| Adjusted R-squared | 0.490692 | S.D. dependent var | | 1.971800 |
| S.E. of regression | 1.407191 | Akaike info criterion | | 3.585409 |
| Sum squared resid | 166.3358 | Schwarz criterion | | 3.752063 |
| Log likelihood | -155.3434 | Hannan-Quinn criter. | | 3.652614 |
| F-statistic | 18.14937 | Durbin-Watson stat | | 0.978507 |
| Prob(F-statistic) | 0.000000 | | | |

Note: *** $p < 0.01$, ** $p < 0.05$. Source: EViews 10.0, 2023. N=90 (9 banks, 2013–2022)

The adjusted R^2 of 0.49 indicates that approximately 49% of variations in profit for the year are explained by the five non-interest income components. The F-statistic (18.15, $p = 0.000$) confirms the overall statistical fitness of the model.

Discussion of Findings

Dividend Income exerted a positive and significant effect on profit for the year ($\beta = 0.6899$, $p = 0.0000$), making it the strongest predictor in the model. This implies that a 1% increase in dividend income corresponds to approximately a 0.69% increase in profit for the year. This finding aligns with Portfolio Theory, which advocates income diversification for improved performance, and is consistent with Shah et al. (2018) and Antao and Karnik (2022), who found positive links between non-interest income components and bank performance. The null hypothesis is rejected.

Rental Income showed a positive but non-significant effect on profit for the year ($\beta = 0.0955$, $p = 0.3267$), suggesting that while real estate investments contribute positively to DMB profitability, the effect is not statistically meaningful within the study period. This is consistent with Yunusa et al. (2022), who found similar results for Nigerian DMBs. The null hypothesis is accepted.

Foreign Exchange Income had a positive but non-significant effect ($\beta = 0.0894$, $p = 0.1832$), indicating that despite the active participation of Nigerian DMBs in forex trading, the income generated does not significantly drive profit for the year, possibly due to the high volatility and risk exposure associated with foreign exchange transactions (Wong et al., 2008). This finding aligns with Githaiga et al. (2019) in the Kenyan context. The null hypothesis is accepted.

Fixed Income Securities exerted a positive and significant effect on profit for the year ($\beta = 0.1630$, $p = 0.0005$), consistent with Portfolio Theory's proposition that holding diversified, low-risk assets improves overall performance. Investment in government bonds, Treasury bills, and commercial papers provides stable alternative income and serves as a risk buffer against unexpected business shocks. This aligns with Alshadadi and Deshmukh (2021). The null hypothesis is rejected.

Foreign Currency Revaluation Income had a positive and significant effect on profit for the year ($\beta = 0.0924$, $p = 0.0122$), reflecting the upward flexibility of foreign currency values in Nigeria, where periodic revaluation of foreign currency holdings generates positive income gains. This is consistent with Brunnermeier et al. (2019) and supports Risk Management Theory's emphasis on managing currency exposures for financial stability. The null hypothesis is rejected.

Conclusion and Recommendations

This study examined the effect of non-interest income on the financial performance of nine DMBs listed on the NGX from 2013 to 2022 using panel least squares regression. Three of the five non-interest income components: dividend income, fixed income securities and foreign currency revaluation income exerted positive and significant effects on profit for the year, while rental income and foreign exchange income, though positive, were non-significant. Collectively, the predictive variables explained approximately 49% of the variation in profit for the year, confirming that non-interest income diversification is a meaningful driver of DMB performance in Nigeria.

Based on these findings, DMB managers are recommended to: increase equity investments in quoted firms to grow dividend income; invest in real estate for rental income as a viable long-term alternative revenue source; actively expand foreign exchange trading operations to capture more significant profit contributions; diversify into fixed income instruments such as bonds, Treasury bills, and commercial papers as both income-generating and risk-mitigating assets; and strategically increase foreign currency holdings to benefit from periodic revaluation gains, given the persistent upward trend in foreign currency values in Nigeria.

Future studies should expand the sample to cover all 22 quoted DMBs, extend the study period beyond 2022, and incorporate macroeconomic moderating variables such as inflation, interest rates, and exchange rate volatility to improve model explanatory power beyond the current 49%.

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