INFLUENCE OF FOREIGN DIRECT INVESTMENT ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN NIGERIA

Pidau Benjamin AMUGA
Postgraduate Student,
Department of Banking and Finance,
Modibbo Adama University,
Yola Nigeria
amugapidau@gmail.com

Prof. Bashir Ahmad DANEJI
Department Banking and Finance
Modibbo Adama University, Yola,
Adamawa State, Nigeria
badaneji@mau.edu.ng

Dr. Gbenga Festus BABARINDE
Department of Banking and Finance,
Modibbo Adama University, Yola,
Adamawa State, Nigeria
liftedfgb@gmail.com

Corresponding author:
Pidau Benjamin AMUGA
Postgraduate Student,
Department of Banking and Finance,
Modibbo Adama University,
Yola Nigeria
amugapidau@gmail.com

ABSTRACT

This study investigated the influence of Foreign Direct Investment (FDI) on the financial performance of commercial banks in Nigeria. The key indicator used here is Profit Margin (PM), utilizing secondary data from 1991 to 2022, obtained from the Central Bank of Nigeria, National Bureau of Statistics, World Bank, St. Louis Bank as well as Nigeria Deposit Insurance Corporation (NDIC) database, and financial reports of commercial banks, the study employed a variety of statistical techniques to analyze the data. These techniques include the Augmented Dickey-Fuller (ADF) unit root test for stationarity, cointegration test for long-run relationships, and the Vector Autoregressive (VAR) model for dynamic interactions. Additionally, post-estimation diagnostics such as the Breusch-Godfrey Serial Correlation LM Test, Jaque-Bera test, and CUSUM test for model stability were conducted. The findings reveal that FDI significantly influences the financial performance (Profit Margin) of commercial banks in Nigeria. Specifically, FDI shows a positive influence on profit margins in the short term, while long-term effects vary due to factors like increased competition and changing economic conditions. The study also highlights the importance of considering macroeconomic variables such as GDP, inflation, and trade openness in the analysis.

Keywords: *Foreign direct investment, profit margin, financial performance, commercial banks, and banks.*

1.0 INTRODUCTION

Foreign Direct Investment (FDI) is considered a vital engine for economic development, particularly in developing countries, where it fosters capital inflows, technological advancements, and improved business practices. Recent literature emphasizes that FDI not only strengthens economic growth but also supports the development of financial institutions by enhancing their competitiveness, risk management capabilities, and access to global markets (Mughal & Akram, 2024; Rozdorozhnyi, 2024). Nigeria's financial sector, including its commercial banks, has undergone significant reforms aimed at liberalizing the economy to attract FDI.

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These reforms include the establishment of favorable investment laws, such as the Nigerian Investment Promotion Commission Act, and policies to enhance financial inclusion and stability (Aluoch & Sangori, 2024). Financial performance has been perceived only through the ability of a company to yield a profit (Akintimehin et al, 2019).

The study's focus on commercial banks is justified by their central role in economic development, financial intermediation, and the absorption of Foreign Direct Investment (FDI). As key financial institutions, commercial banks connect surplus units (depositors) with deficit units (borrowers), thereby mobilizing and allocating resources efficiently within the economy (Anthony-Orji et al., 2024). Their unique position as intermediaries makes them critical channels through which FDI inflows influence the broader economy. FDI inflows often target sectors with high financial connectivity, making commercial banks critical conduits. These banks facilitate the entry and utilization of foreign investments by providing loans, credit facilities, and advisory services to foreign investors and domestic firms (Mughal & Akram, 2024). This study aims to investigate the dynamic relationship between FDI and the financial performance of commercial banks in Nigeria on profit margin, addressing the gaps in existing literature and providing insights into optimizing FDI's role in the financial sector.

Several studies have attempted to assess the influence of Foreign Direct Investment (FDI) on the financial performance of banks using various methodological approaches. For instance, Korna et al. (2013) utilized Ordinary Least Squares (OLS) regression analysis to examine the relationship between FDI and the financial performance of commercial banks. Similarly, Kariuki and Sang (2018) employed a descriptive research design coupled with multivariate regression analysis on panel data to investigate the impact of FDI on financial institutions' performance. However, there has been limited research utilizing a longitudinal research design and time-series analysis to assess the effects of FDI on financial performance, despite its potential benefits in addressing issues of non-stationarity in time-series data. Thus, this study aims to fill this gap by employing time-series analysis to provide a more nuanced understanding of the influence of FDI and the financial performance of commercial banks in Nigeria.

The structure of the study includes introduction, literature review, methodology, results, and discussion, conclusion and recommendations and reference.

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2.0 LITERATURE REVIEW

This section covers theoretical review, empirical review as well as theoretical framework for the study.

2.1 Theoretical Review

Market Power Theory

Market power theory is another influential theory, formulated by Hymer (1976) and further expanded by Kindleberger (1969). This theory argues that multinational firms engage in foreign investment to exploit market imperfections and establish dominance in the host country's financial sector. In the context of commercial banks, FDI can lead to market consolidation, where large foreign-owned banks outcompete smaller domestic banks, thereby reducing market diversity. While this can result in improved efficiency and lower banking costs, it can also limit domestic bank expansion and lead to profit repatriation, where foreign-owned banks transfer earnings back to their home countries instead of reinvesting locally (Tomashuk & Khaietska, 2024). Critics argue that foreign investors may engage in monopolistic practices, making it difficult for local banks to thrive. Despite these criticisms, this theory provides insights into how foreign bank entry reshapes competition and financial performance in the banking sector.

Eclectic Theory (OLI Paradigm)

The Eclectic Theory, also known as the OLI Paradigm, is one of the most influential theories in international business and foreign investment. It was developed by John Dunning (1977, 1980, 1988) to explain why firms engage in Foreign Direct Investment (FDI) rather than exporting goods or entering into licensing agreements. The theory combines three key elements Ownership, Location, and Internalization (OLI) to determine the conditions under which a firm will choose to expand through FDI. Given the increasing globalization of financial markets and the expansion of foreign banks into developing economies, the OLI paradigm provides a strong theoretical foundation for analyzing the impact of FDI on the financial performance of deposit money banks (DMBs).

Despite its broad applicability, the OLI paradigm has been criticized for several reasons:

i. **Neglect of institutional factors:** The theory assumes that ownership and location factors alone determine FDI decisions, but institutional frameworks such as legal systems, financial regulations, and governance quality also play a significant role (Meyer & Peng, 2016).

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ii. **Limited predictive power:** While the OLI paradigm explains why firms engage in FDI, it does not fully address when and how firms decide to internationalize (Cantwell, 2017).

Despite these limitations, the theory remains a fundamental model for explaining FDI and its effects on the financial sector.

2.2 Empirical Review

These are statements of facts based on empirical evidence from other researchers in related fields of study and it helps the researcher to establish the inconsistencies and discrepancies in research findings that may require further research efforts.

Mughal and Akram (2024), examined the relationship between FDI and banking sector stability in developing countries, using data from the World Bank Financial Stability Index and IMF reports. The study employed structural equation modeling (SEM) to analyze the impact of foreign capital on the stability of commercial banks. The findings revealed that FDI inflows increased bank stability by improving liquidity and strengthening risk management policies. However, the study also highlighted that excessive foreign ownership led to an over dependence on external capital, which could make banks vulnerable during global financial crises. Although the study provides strong empirical evidence, it does not adequately address the role of domestic policies in mitigating the risks associated with FDI inflows.

Maude et al. (2023), in their study aimed to examine the impact of foreign direct investment on financial institution performance in Nigeria. They grounded their work under three theories (revenue maximization principle, pecking order theory and Internationalization Model) in relation to FDI and financial institution's performance. The study employed a survey design which was based on 10 selected financial institution operating in Jos Metropolitan city of Plateau, Nigeria as at 1st January 2022. Primary data and secondary data were used for the study. Panel regression analysis was employed for the study to determine the impact of FDI on financial institutions' performance in the study area. The results of the study revealed that FDI variables indicates a strong impact on financial institution performance among Nigerian financial institutions.

Imoro (2022) in their master's thesis studied the effect of foreign direct investment on bank performance in Africa. The study used secondary data on FDI and bank performance of 21 banks in Africa between 2010 – 2020. Multiple regression analysis was used to determine the effect of FDI on the financial

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performance of banks in Africa. The study revealed that, in the first model (Model), foreign direct investment (FDI) had a positive and significant impact on the return of assets of banks in Africa. As a result, foreign direct investment (FDI) helps businesses increase their profitability by increasing their return on assets. Additionally, foreign direct investment (FDI) had a favorable and statistically significant effect on the return of equity of African banks.

Kariuki and Sang (2018), in their thesis on foreign direct investment and bank performance in Kenya employed a descriptive research design and positivism research philosophy. The study targeted a population of 39 commercial banks in Kenya. Annual data for the period of ten years (2005 to 2015) was used. The study used secondary panel data. Multivariate regression analysis was used for the study. The findings of the study revealed that foreign equity capital had a significant effect on the Kenya commercial banks return on equity in a positive and significant manner. Furthermore, reinvested foreign earnings have a positive and significant effect on return on equity in commercial banks in Kenya. In addition, the study found that intra-company loans affected the Kenyan banks performance in a positive and significant manner. The study further revealed that, intra-company loans positively affected the Kenyan commercial bank's return on equity.

2.3 Theoretical Framework

The OLI framework is particularly useful in analyzing how FDI affects the financial performance of commercial banks in emerging economies such as Nigeria. This study will be based on macro-economic eclectic theory or the OLI paradigm theory. This is because the theory looks at FDI from the macroeconomic point of view and is categorized under theories that assume imperfect markets (Dunning, 2008). The banking sector is an imperfect market and the nature of data which happened to be secondary data on macro-economic variables. The eclectic paradigm seeks to offer a general framework for determining the extent and patterns of both foreign owned DBMs undertaken by country's own companies, and that of domestic production owned and controlled by foreign investors. Therefore, this study will utilize the paradigms of this theory to provide a framework for the research findings.

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3.0 METHODOLOGY

This study adopted a time series approach to examine the influence of FDI on the financial performance of commercial banks in Nigeria. The research involved the collection of secondary data obtained from the Central Bank of Nigeria, National Bureau of Statistics, world bank, St. Louis Bank as well as Nigeria Deposit Insurance Corporation (NDIC) database, and financial reports of commercial banks. The data covered a specified timeframe between 1991-2022, so as to have adequate results allowing for the examination of trends and patterns.

3.1 Method of Data Analysis

Parsimonious Standard Vector Autoregressive (VAR) was employed to analyze the influence of FDI on financial performance indicators. The analysis explored both short-term and long-term effects, capturing the dynamic nature of the relationship. This comprehensive and systematic approach to data analysis aimed to ensure the robustness and reliability of the study's findings, adhering to the highest standards of professional research methodologies. The time series data underwent thorough exploratory analysis, to unveil key patterns and trends. To identify the most suitable time series model for variable estimation, several preliminary tests such as the Augmented Dickey Fuller (ADF) unit root test, lag selection criteria were considered such as the Akaike Information Criterion (AIC) and Schwarz Information Criterion (SIC) among others and post-estimation evaluation.

3.2 Model Specification

The time series regression model selected for the assessment of the influence of foreign direct investment on the financial performance of commercial banks in Nigeria is expressed through the explicit multiple regression model. The model is shown below.

$PM_t = \beta_0 + \beta_1 FDI_t + \beta_2 GDP_t + \beta_3 TO_t + \beta_4 INF_t + u_t$

Where: PM_t = Profit Margin

FDI_t, = Foreign Direct Investment

GDP_t, = Gross Domestic Product

TO_t = Trade Openness

INF_t, = Inflation Rate

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u_t = Unobserved/Error term for PM

4.0 RESULTS AND DISCUSSIONS

4.1 Unit Root Test (Test of Stationary)

The results presented in Table1 show the outcomes of the Augmented Dickey Fuller (ADF) unit root tests for various economic variables, both at their levels and at their first differences. The purpose of the unit root test is to determine whether a time series variable is non-stationary and possesses a unit root. Non-stationarity in time series data can lead to unreliable statistical inferences, thus it is crucial to identify and address it appropriately.

Table 1. Unit Root Test Table (ADF)

At Level.				At First Difference			
With Constant & Trend	**t-Statistic**	**Prob.**	**5% Level**	**With Constant &Trend**	**t-Statistic**	**Prob.**	**5% Level**
FDI	-3.934	0.0228	**	d(FDI)	-6.2798	0.0001	***
GDP	-2.3015	0.4204	No	d(GDP)	-4.3312	0.0092	***
INFL	-2.5456	0.3058	No	d(INFL)	-5.2359	0.0014	***
PM	-3.7968	0.0339	**	d(PM)	-5.5963	0.0005	***
TOP	-2.157	0.4956	No	d(TOP)	-4.4434	0.0090	***

Notes: (*) Significant at the 10%; (**) Significant at the 5%; (***) Significant at the 1%. and (no) Not Significant

Source: Author's Compilation Using E-views 10, 2025

The variables in table 1 showed mixed order of integration regarding their stationarity. At levels, the ADF test for Foreign Direct Investment (FDI) yields a t-statistic of -3.934 with a probability value of 0.0228, which is below the 5% significance level. This indicates that FDI is stationary at its level when considering both a constant and a trend. Gross Domestic Product (GDP) has a t-statistic of -2.3015 and a probability value of 0.4204, which is higher than the 5% significance level, suggesting that GDP is non-stationary at its level. Similarly, Inflation (INFL) with a t-statistic of - 2.5456 and a probability value of 0.3058, and Trade Openness (TOP) with a t-statistic of -2.157 and a probability value of 0.4956, are

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also non-stationary at their levels. Profit Margin (PM), however, shows a t-statistic of -3.7968 and a probability value of 0.0339, indicating it is stationary at its level.

Examining the variables at their first differences, all show strong evidence of stationarity. Foreign Direct Investment (d(FDI)) has a t-statistic of -6.2798 with a probability value of 0.0001, Gross Domestic Product (d(GDP) has a t-statistic of -4.3312 with a probability value of 0.0092, and Inflation (d(INFL)) has a t-statistic of -5.2359 with a probability value of 0.0014. Profit Margin (d(PM)) with a t-statistic of -5.5963 and a probability value of 0.0005, and Trade Openness (d(TOP)) with a t-statistic of -4.4434 and a probability value of 0.0090, are all stationary at their first differences, with probability values below the 1% significance level.

These results suggest that variables such as GDP, INFL, and TOP are non-stationary at their levels and require differencing to achieve stationarity. On the other hand, FDI and PM are stationary at their levels, meaning they do not require differencing. The first-differenced variables (d(FDI), (GDP), d(INFL), d(PM), and d(TOP)) are all stationary, indicating that differencing has effectively removed the unit root. Having that profit margin, which is the dependent variable is stationary at level, this implies that standard vector autoregressive (VAR) is the most appropriate for estimate thing the time series.

3.2 Optimal Lag Length Selection

To obtain the optimal lag length for the time series analysis model, vector autoregressive (VAR) lag selection criteria were employed to determine the optimal lag length. Various criteria were considered for the optimum lag selection which include sequential modified LR Test (LR), Final Prediction Error Test (FPE), Akaike information criterion (AIC), schwarz information criterion and Hannan-Quinn information criterion (HQ)

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Table 2. Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	406.3621	NA	3.88e-18	-28.74015	-28.54984*	-28.68197
1	416.2146	16.18614	6.11e-18	-28.30104	-27.34947	-28.01013
2	435.5039	26.17845	5.23e-18	-28.53600	-26.82316	-28.01237
3	468.1775	35.00743*	1.97e-18*	-29.72697*	-27.25287	-28.97061*

Source: Authors Compilation (2025) using E-views 9 enterprise. * indicates lag order selected by the criterion LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

As shown in table 2, it became apparent that a lag length of 3 years is the optimal lag length, given that the AIC has the least value of -29.72697 which was also supported by the final prediction error test and Hannan Quinn information criteria.

Table 3. Vector Autoregression Estimates

	PM	FDI	D_INF	D_TOP
PM(-1)	0.493230	-0.053464	0.058862	-2.27E-12
	(0.24222)	(0.06055)	(0.58599)	(8.7E-12)
	[2.03632]	[-0.88300]	[0.10045]	[-0.25956]
PM(-3)	0.234712	0.104756	0.188772	7.75E-12
	(0.24613)	(0.06153)	(0.59547)	(8.9E-12)
	[0.95360]	[1.70262]	[0.31702]	[0.87165]
FDI(-1)	-0.959432	0.435752	7.300360	-3.49E-12
	(0.70159)	(0.17538)	(1.69736)	(2.5E-11)
	[-1.36751]	[2.48463]	[4.30102]	[-0.13785]
FDI(-2)	1.468129	0.001160	-4.288531	5.02E-11
	(0.91265)	(0.22814)	(2.20797)	(3.3E-11)
	[1.60864]	[0.00509]	[-1.94229]	[1.52220]
FDI(-3)	-0.450928	0.218813	-4.989575	-3.35E-11
	(0.65975)	(0.16492)	(1.59613)	(2.4E-11)
	[-0.68348]	[1.32678]	[-3.12604]	[-1.40638]

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D_INF(-1)	-0.079840	0.017041	-0.031266	-4.37E-12
	(0.07371)	(0.01843)	(0.17832)	(2.7E-12)
	[-1.08318]	[0.92486]	[-0.17533]	[-1.64249]
D_INF(-2)	0.023704	-0.011529	-0.062043	1.61E-12
	(0.05096)	(0.01274)	(0.12330)	(1.8E-12)
	[0.46511]	[-0.90495]	[-0.50320]	[0.87362]
D_INF(-3)	-0.025787	-0.027565	0.112513	-6.13E-12
	(0.04886)	(0.01221)	(0.11821)	(1.8E-12)
	[-0.52776]	[-2.25680]	[0.95180]	[-3.47177]
D_TOP(-1)	5.15E+09	7.20E+08	-2.19E+10	-0.031313
	(5.4E+09)	(1.4E+09)	(1.3E+10)	(0.19648)
	[0.94654]	[0.52936]	[-1.66157]	[-0.15937]
D_TOP(-2)	2.15E+09	3.61E+09	2.57E+10	-0.195509
	(5.3E+09)	(1.3E+09)	(1.3E+10)	(0.19151)
	[0.40469]	[2.72575]	[2.00458]	[-1.02087]
D_TOP(-3)	1.24E+10	3.36E+08	-1.73E+10	0.091659
	(6.5E+09)	(1.6E+09)	(1.6E+10)	(0.23345)
	[1.91336]	[0.20813]	[-1.10676]	[0.39263]
C	3.937012	0.005570	5.653174	2.85E-11
	(2.23085)	(0.55765)	(5.39709)	(8.1E-11)
	[1.76480]	[0.00999]	[1.04745]	[0.35326]
R-squared	0.447484	0.666530	0.826103	0.522470
Adj. R-squared	0.005471	0.399755	0.686986	0.140446
Sum sq. resids	88.58896	5.535627	518.5106	1.16E-19
S.E. equation	2.430212	0.607488	5.879403	8.78E-11
F-statistic	1.012378	2.498468	5.938170	1.367636
Log likelihood	-55.85552	-17.03628	-80.59286	617.3892
Akaike AIC	4.918251	2.145449	6.685205	-43.17065
Schwarz SC	5.536775	2.763972	7.303728	-42.55213
Mean dependent	7.553806	1.319714	-1.363733	6.27E-12
S.D. dependent	2.436888	0.784104	10.50875	9.47E-11

Determinant resid covariance (dof adj.)	4.28E-19
Determinant resid covariance	3.52E-20
Log likelihood	468.1775
Akaike information criterion	-29.72697

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Schwarz criterion	-27.25287

The lagged values of PM (PM (-1), and PM (-3)) are included to capture the autoregressive dynamics of profit margin. The coefficient of PM (-1) is 0.4932 with a t-statistic of 2.0363, indicating that past bank performance has a significant positive impact on current performance. This suggests that banks experiencing strong financial performance in the previous period are more likely to maintain their momentum in the current period. Similarly, the coefficient of PM (-3) is 0.2347, but it is also statistically insignificant (t = 0.9536), suggesting that past performance effects diminish over time. This result aligns with the expectation that while short-run persistence exists in banking performance, its influence weakens as more lags are considered.

The coefficient of FDI (-1) is -0.9594, with a t-statistic of -1.3675, indicating that the immediate impact of FDI on profit margin performance is negative but not statistically significant. This suggests that while an influx of foreign investment may lead to initial structural adjustments in banks, its immediate effect on profit margin is not strong. In contrast, FDI (-2) has a positive coefficient of 1.4681 and a t-statistic of 1.6086, which suggests that FDI contributes positively to bank performance in the medium term, though the effect is only marginally significant. Interestingly, the coefficient of FDI (-3) is negative (-0.4509) and statistically insignificant (t = -0.6835), implying that the long-term impact of FDI may fluctuate due to varying external economic conditions or banking regulations. These results suggest that FDI takes time to translate into meaningful improvements in bank performance, supporting the view that foreign investments require an adjustment period before their benefits are fully realized. Policymakers should focus on creating an enabling environment that allows FDI to enhance banking efficiency in a sustained manner.

The coefficient of D_INF (-1) is -0.0798, with a t-statistic of -1.0832, indicating a weak negative effect on profit margin. This suggests that higher inflation in the previous period slightly reduces bank profit margin, possibly due to rising operational costs or a decline in the real value of bank assets. The coefficients of D_INF(-2) (0.0237, t = 0.4651) and D_INF(-3) (-0.0258, t = -0.5278) are statistically insignificant, meaning that inflation in earlier periods does not exert a strong influence on current banking

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performance. These findings align with economic expectations that moderate inflationary effects exist in the short run but may not have persistent long-term consequences for bank profitability.

The estimated coefficients of D_TOP (-1), D_TOP (-2), and D_TOP (-3) are all statistically insignificant, indicating that trade openness does not have a strong short-run impact on the profit margins of commercial banks. The insignificance of trade openness could suggest financial sector reforms and exchange rate stabilization.

The R-squared value for the regression equation was 0.4475, indicating that approximately 44.75% of the variation in profit margin was explained by the independent variables. However, the Adjusted R-squared is much lower (0.0055), suggesting that the model may suffer from overfitting or the inclusion of weak predictors. The F-statistic for the PM equation (1.0124) is relatively low, implying that while some individual coefficients are significant, the overall explanatory power of the model is limited. This suggests that other unobserved factors may influence banking performance, which future research could explore.

3.3 Post Estimation Tests

i. VAR Stability Test

The Inverse Roots of the AR Characteristic Polynomial in Figure 4.1 provide a graphical method for assessing the stability of the Vector Autoregression (VAR) model. Stability is a crucial requirement for valid inference in time series models because an unstable VAR can lead to explosive forecasts and unreliable impulse response functions.

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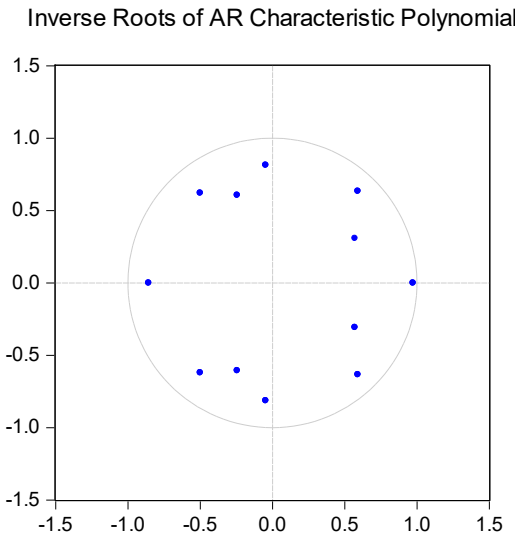

Figure 1 Roots of Characteristic Polynomial

The Inverse Roots of the AR Characteristic Polynomial in Figure1 provide a graphical method for assessing the stability of the Vector Autoregression (VAR) model. Stability is a crucial requirement for valid inference in time series models because an unstable VAR can lead to explosive forecasts and unreliable impulse response functions.

In the stability test plot, the dots represent the inverse roots of the characteristic polynomial. The unit circle, which serves as the stability boundary, is clearly drawn on the graph. All inverse roots lie well inside the unit circle, confirming that the VAR model is stable. No root is located on or outside the boundary, indicating that the estimated model satisfies the stationarity condition required for valid inference. The model's stability ensures that impulse response functions, variance decompositions, and other dynamic analyses derived from this VAR framework are reliable and meaningful.

ii. Residual Diagnostic Tests

a. Test for Autocorrelation

The VAR Residual Serial Correlation LM Test in table 4 determined whether the residuals of the Vector Autoregression (VAR) model exhibit autocorrelation (i.e., whether the errors are correlated across time). The presence of serial correlation in residuals violates one of the fundamental assumptions of VAR models, potentially leading to inefficient and biased parameter estimates**.**

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Table 4.VAR Residual Serial Correlation LM Tests

Lags	LM-Stat	Prob
1	11.65352	0.7675
2	20.73193	0.1890
3	15.56113	0.4840

Probs from chi-square with 16 df.

At Lag 1, the LM-statistic is 11.65352, with a p-value of 0.7675. Since the p-value is well above 0.05, we fail to reject the null hypothesis, meaning that there is no significant autocorrelation at lag 1. At Lag 2, the LM-statistic is 20.73193, with a p-value of 0.1890. This also indicates no significant autocorrelation at lag 2. At Lag 3, the LM-statistic is 15.56113, with a p-value of 0.4840, further confirming no serial correlation at this lag.

Since all p-values exceed the 0.05 threshold, we fail to reject the null hypothesis at all lag orders, confirming that the residuals are not serially correlated. This means The VAR model passes the autocorrelation test, indicating that the estimated residuals are well-behaved.

iii. Test for Normality of Error Term

The Jarque-Bera (JB) test in table 5 assesses whether the residuals of the Vector Autoregression (VAR) model follow a normal distribution. This is important because normality of errors is a key assumption in many econometric analyses, including hypothesis testing and confidence interval construction.

Table 5 Jarque-Bera Test

Component	Jarque-Bera	df	Prob.
1	2.482729	2	0.2890
2	0.970334	2	0.6156
3	3.936083	2	0.1397
4	1.222895	2	0.5426
Joint	8.612041	8	0.3761

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The overall Jarque-Bera statistic is 8.612041, with a p-value of 0.3761. Since this is greater than 0.05, we fail to reject the null hypothesis, confirming that the residuals of the VAR model do not significantly deviate from normality.

iv. Test for Constant Variance of Error Term

The heteroskedasticity test in table 6 assesses whether the variance of the error terms (residuals) remains constant over time. This is crucial because heteroskedasticity can affect the efficiency of estimators and lead to biased standard errors, making inference unreliable.

Table 6 VAR Residual Heteroskedasticity Tests

Date: 02/17/25 Time: 00:25		
Sample: 1991 2022		
Included observations: 28		
Joint test:		
Chi-sq	**Df**	**Prob.**
247.4805	240	0.3563

The Chi-square statistic is 247.4805, with 240 degrees of freedom (df). The p-value is 0.3563, which is greater than the 0.05 significance level. Since the p-value is not significant, we fail to reject the null hypothesis, implying that there is no statistical evidence of heteroskedasticity in the VAR model residuals. The residuals exhibit constant variance, satisfying one of the key assumptions of VAR modeling. Since heteroskedasticity is not detected, the estimated coefficients remain BLUE (Best Linear Unbiased Estimators), ensuring that the standard errors and hypothesis tests are reliable.

4.0 CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

The study titled "Influence of Foreign Direct Investment on the Financial Performance of Commercial Banks in Nigeria" aimed to investigate how Foreign Direct Investment (FDI) influences the financial performance of commercial banks in Nigeria. The research was conducted to address the gaps in existing literature and to provide a comprehensive analysis of the relationship between FDI and financial

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performance indicator such as Profit Margin (PM). The study utilized secondary data for the period from 1991 to 2022. The data were obtained from reliable sources such as, Nigeria Deposit Insurance Corporation (NDIC), Central Bank of Nigeria (CBN), National Bureau of Statistics (NBS), and financial reports of commercial banks. Key financial indicators, including FDI inflows, GDP, inflation rates, import and export, were collected to analyze their impact on the financial performance of commercial banks.

The population of the study consisted of all commercial banks operating in Nigeria within the specified period. The exact number of commercial banks varied over the years due to mergers, acquisitions, and regulatory changes. However, the study focused on a consistent dataset to ensure the robustness of the analysis.

The study employed a variety of statistical techniques to analyze the data collected. Initially, the Augmented Dickey-Fuller (ADF) unit root test was conducted to check for stationarity in the time series data. The Differenced Vector Autoregressive (VAR) model was then used to estimate the dynamic interactions and influences of the variables on profit margin of Commercial bank. For model specification, the study utilized the Akaike Information Criterion (AIC) and Schwarz Information Criterion (SIC) for optimal lag selection. Post-estimation tests, including the Breusch-Godfrey Serial Correlation LM Test and the Jaque-Bera test, were conducted to validate the results.

4.2 Recommendations

These results provide valuable insights for policymakers and financial institutions aiming to optimize the benefits of FDI in the banking sector. Based on these findings, the study recommends enhancing FDI policies, strengthening regulatory frameworks, improving financial infrastructure, encouraging investment diversification, and adopting robust risk management practices. Additionally, promoting transparency, fostering collaboration with foreign investors, and facilitating knowledge transfer are essential for leveraging the benefits of FDI to boost the financial performance of commercial banks in Nigeria.

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