(Jabss) Journal of Accounting, Business and Social Sciences
Volume 10 Number 3, October 2026; ISSN 2672-4235

FINANCIAL RATIO AND PERFORMANCE OF DEPOSIT MONEY BANKS IN NIGERIA

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Abstract

This study analyzed the financial ratio and performance of deposit money banks in Nigeria for the period of 2012-2023. The objective of the study was to examine the effect of debt-to-equity ratio, earning per share, dividend yield ratio and capital-labour ratio on performance of deposit money banks in Nigeria. The variables were financial performance as the dependent variables while debt-to-equity ratio, earning per share, dividend yield ratio and capital-labour ratio, were the independent variables. These variables were source from the annual report of the selected bank. Panel Least Squared (PLS) method of data analysis was used**.** The population of the study was 10 listed deposit money banks, while the sample size was ten (10) deposit money banks**.** The study found that, Debt to equity ratio has no significant effect on performance of deposit money banks in Nigeria. (T-test -0.393252, p=0.6950); Earnings per share have significant effect on performance of deposit money banks in Nigeria. (t-test 3.887656, p=0.0000); Dividend yield ratio has significant effect on performance of deposit money banks in Nigeria. (T-test 2.553998, p=0.0009). The study recommended management should focus on optimizing the Debt to equity ratio while balancing it with investment opportunities that yield higher returns. Companies can increase EPS by repurchasing their own shares, which can lead to a temporary increase in EPS. It is important to consider share buybacks when evaluating EPS. firms should consider all the factors that affect dividend per share when formulating policy, in order to have an optimal policy that satisfies its shareholders and other interested third party

Keywords: Debt-to-equity ratio, earning per share, dividend yield ratio and capital-labour

1.1 Introduction

In recent decades, the Nigerian banking sector has undergone significant transformation, driven by reforms, regulatory changes, technological advancements, and increased competition. Among the key indicators of financial health and strategic direction in deposit money banks (DMBs) is the investment ratio—a measure reflecting the proportion of a bank's assets allocated to investments such as government securities, corporate bonds, and other financial instruments. Investment decisions by banks are crucial in balancing profitability and liquidity. While higher investments can boost returns and stabilize income, excessive exposure to non-core banking assets may constrain lending activities and affect financial intermediation. Conversely, underinvestment may lead to suboptimal asset utilization and reduced earnings. This trade-off is particularly critical in the Nigerian context, where economic volatility, inflation, regulatory interventions by the Central Bank of Nigeria (CBN), and exchange rate instability challenge the risk-return dynamics of investment portfolios. As financial intermediaries, DMBs in Nigeria play a vital role in mobilizing savings and allocating capital efficiently. Their performance—often measured through metrics like return on assets (ROA), return on equity (ROE), and net interest margin (NIM)—is influenced not only by macroeconomic factors but also by internal financial strategies, including how much is invested and in what types of assets.

The investment decision is considered the most important decision in the financial decisions of a business because it creates value for the business. A correct investment decision will contribute to the value of the business, thereby increasing the asset value for the owner. In contrast, a wrong investment decision and or management will cause loss of business value leading to damage to the owners' properties (Trang & Duang, 2022). Kaddumi (2017) most important conclusion was that, profitability indicators had a favorable, considerable impact on investment choices. According to studies by Chalimatuz (2021);Komarudin and Affandi (2020); and Murniati et al. (2019), financing and investment decisions have a positive and significant impact on the firm' value. As a result, the primary goal of the business is to maximize owner wealth by boosting the firm's value through increase in investments. An essential component of the performance and management of the banking sector are financial management practices (Alnajjar, 2017). Therefore, in order to achieve sustained market value, it is crucial for bank management to looks for strategic ways to increase their investments. In deposit money

banks, investment decision comprises one of the most essential as well as tough decisions the financial management took besides retained earnings and financing decision. More risk is attached to investment decision as a result of deposit money banks' kind of work as well as their reliance on others' funds to finance their asset (Hawraa & Hasan, 2022). An activity or an action entailing investment, whereby an investor is a legal entity or natural person who own capital to invest is referred to as investment. It is an expectation that the expansion of current funds will bring about rewards in the future (Nguyen et al., 2021).

A corporate finance organization is mostly concerned with shareholders' wealth maximization. To increase shareholders wealth there are key financial decisions which the finance manager must deliberate on (Quddus, Pavelkova, Hussain, & Pham, 2022). The four key decisions which a finance manager is mostly involved in are debt to equity ratio, earning per share, capital-labour ratio (that have individual or collective influence on shareholders wealth) as well as companies' profit (Hussain, Rafiq, Quddus, Ahmad, Tien, (2021). Financial performance is influenced by several factors among them; capital structure due to debt agreement, dividend decision which can determine the retained earnings that influence future company's growth, investment decision which will determine whether investors wealth increases or decreases as well as liquidity decisions which will determine the foregone benefits associated with particular amount held in current assets such as work in progress (Tien, Hoang, Popesko, Hussain, & Quddus, 2021).

The success of any organization depends on sound investment decisions. Important investment decisions that decide an organization's success or failure include the level of investment in banking sector that focuses on maintaining an appropriate level of current assets and liabilities, investment decisions that direct the amount of capital required, and the project in which to invest, and financing decisions that determine the capital structure. In light of these dynamics, understanding the relationship between investment ratios and the performance of deposit money banks in Nigeria becomes imperative. This study aims to explore how investment decisions influence key performance indicators such as return on assets (ROA), return on equity (ROE), and net interest margins (NIM). By examining these relationships, the research seeks to provide insights into optimal investment strategies that can enhance the financial performance and stability of Nigerian banks in an increasingly complex economic landscape.

1.2 Objectives of the Study

The main objective of the study is to examine financial ratio and performance of deposit money banks in Nigeria. The specific objectives include:

To examine the effect of debt-to-equity ratio on performance of deposit money banks in Nigeria.

To investigate the effect of earning per share on performance of deposit money banks in Nigeria.

To find out the effect of dividend yield ratio on performance of deposit money banks in Nigeria.

To determine the effect of capital-labour ratio on performance of deposit money banks in Nigeria.

1.3 Research Hypothesis

Ho1: Debt to equity ratio has no significant effect on performance of deposit money banks in Nigeria

Ho2: Earning per share has no significant effect on performance of deposit money banks in Nigeria

Ho3: Dividend yield ratio has no significant effect on performance of deposit money banks in Nigeria.

Ho4: Capital-labour ratio has no significant effect on performance of deposit money banks in Nigeria.

2.0 Review of related Literature

2.1 Conceptual Framework

2.1.1 Financial Ratio

The investment ratio is a financial metric that evaluates the proportion of a firm's or financial institution's resources allocated to investments, relative to its total assets or other financial parameters. In the context of commercial banking, it reflects how much of the bank's assets are tied up in investment securities, such as government bonds, treasury bills, and other financial instruments, as opposed to loans and advances or liquid assets. According to Ahmed, & Malik, (2015) investment ratios are tools used in financial analysis to assess how efficiently an institution utilizes its available capital in income-generating activities. They provide insight into the risk appetite, asset allocation strategy, and revenue diversification of a bank. The higher the investment ratio, the more a bank relies on securities and other investments as a source of income, while a lower ratio may indicate a preference for lending or holding cash equivalents. Investment involves allocating resources, typically money, with the expectation of future returns that exceed the initial outlay, accounting for inflation, opportunity costs, and asso-ciated risks Central Bank of Nigeria (CBN). (2024).. This aligns with the perspective of Ndukwu,and Nwala (2024), who emphasize that an investment requires careful consideration of its potential to yield returns that compensate for these factors. Similarly, Ochimana, et al. (2026) argue that investment decisions require firms to allocate cur-rent assets to long-term ventures, anticipating a steady of benefits over several years. This view complements the insights of Akinsulire, et al. (2022), who highlights the need for businesses to adopt a strategic approach to investment planning.

Furthermore, Nwankwo et al. (2023), stress the importance of understanding profitability and risks in investment planning. For instance, mobile money agents and other stake-holders in financial institutions often base their investment decisions on past profits and anticipated returns, provided they account for the costs of the investment and the uncer-tainties involved. These authors underscore that a com-apprehensive assessment of risk, uncertainty, and financing costs is crucial in investment decision-making. Demirgüç-Kunt, & Huizinga, (2019)..Investors evaluate the expected rate of profit against the cost of financing. When the anticipated profit margin sufficiently covers the risk level, it becomes rational to pursue the investment. This aligns with the findings of Adeyeye

(2020),who emphasize that investors consider opportunities such as independent projects, contingent projects, mutually exclusive projects, cost-reduction projects, expansion projects, and research and development initiatives. Investment decisions are influenced by both subjective and objective factors (Olalekan, & Adeyemi, (2023).Subjectively, an investor's perception of risk, familiarity with advanced techniques, and personal expectations is a significant role . Objectively, however, factors such as pay-off periods, financing costs, and projected returns guide investment choices. Olayemi, & Uchenna, (2024). agree that understanding the pay-off period of a project is essential for investors to make informed decisions regarding their expend

2.1.2 Financial Performance

Financial performance is the single most important factor in assessing growth potential, earnings capacity and overall financial strength (Richardson, 2012). The business dictionary (n.d) defines financial performance as measuring results of a firm's policies and operations in monetary terms and these results are reflected in a firm's return on investments, return on assets, return on equity, liquidity and solvency. Nelly (2010) observed that financial performance measures mainly serve three purposes. One serves as a tool of financial management; two; they serve as major objectives of business and three they serve as a mechanism for motivation and control in an organization. Various researchers have used different financial performance measures. Doyle (2014) says that profitability is the best most used measure of performance in Western companies.

Pandey (2018) defines financial performance as a subjective measure of how well a firm uses assets from its primary mode of business to generate revenues. He further says that the term can also be used as a general measure of a firm's overall financial health over a given period and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. Evaluating the performance of firms is critical to ascertain whether the business is viable. A key performance measure used in modern financial management is financial ratio analysis. The type of financial analysis varies according to the specific interests of the party involved. Most growing businesses ultimately target increased profits, which makes it important to know how to measure profitability. The key standard measures of financial performance include the gross profit margin which measures how much money an organization has made after direct costs of sales have been considered; operating margin lies between the gross and net measures of profitability after overheads are considered before interest and tax payments known as the EBIT (earnings before interest and taxes) margin. Net profit margin is a much narrower

measure of profits, as it takes all costs into account, not just direct ones. All overheads, as well as interest and tax payments, are included in the profit calculation.

According to Allen and Rai (2016), financial performance can be defined as a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. The performance measurement concept indicates that employees can increase the value of the firm by increasing the size of a firm's future cash flow, by accelerating the receipt of those cash flows, or by making them more certain or less risky. There are many ways to measure financial performance, but all measures should be taken in aggregation. Some of the indicators of financial performance are return on equity, liquidity ratios, asset management ratios, profitability ratios, leverage ratios and market value ratios.

2.1.3 Return on Asset as a measure of Performance

ROA is one of the proxies of the measurement of firm performance and it is an indicator of how cost-effective a firm is, comparative to its total assets. It indicates how resourceful management is at using its assets to spawn income. (Ebe, 2021) assert that ROA is not a faultless instrument to measure, but it is the mainly efficient, generally accessible financial measure to evaluate firm's performance. Scholars, it captures the fundamentals of business performance in a holistic way, looking at both income statement performance and the assets required to run a business. Commonly used metrics such as return on equity or returns to shareholders are vulnerable to financial engineering, especially through debt leverage, which can vague the rudiments of a business. Bambang, Elen and Andi (2012) assert that return on assets, as the measurement of performance gives a clue of the financial performance of a firm in a given period, that assist shareholders to know their fate regarding the investment It reports to the investor how healthy a firm uses its assets to make income, and it indicates that a higher ROA provides higher level of management performance.

2.2 Theoretical Framework

The Portfolio Theory developed by Harry Markowitz (1952) underpins the rationale behind investment allocation. It emphasizes balancing return and risk across a diversified portfolio. In banking, this theory supports the allocation of assets between loans, securities, and reserves, aiming for an optimal investment mix that maximizes returns while minimizing risks.

Portfolio Theory, formally known as Modern Portfolio Theory (MPT), was introduced by Harry Markowitz in his seminal 1952 paper "Portfolio Selection" published in The Journal of Finance. This theory revolutionized the field of investment by shifting the focus from evaluating individual securities in isolation to analyzing entire portfolios of assets.

Markowitz (1952) proposed that an investor can construct an "efficient frontier" of optimal portfolios offering the maximum possible expected return for a given level of risk, or the lowest possible risk for a given level of expected return. This is achieved through diversification, where investing in a mix of assets can reduce the overall risk of a portfolio due to imperfect correlations among those assets. Portfolio Theory underpins how banks decide on the allocation of funds across various asset classes—such as loans, government securities, equities, and interbank placements. Commercial banks apply portfolio theory principles to spread investments across: By diversifying, banks can reduce overall portfolio risk while maintaining a satisfactory return on investment (ROI).

Commercial banks are highly sensitive to risk—credit risk, market risk, liquidity risk, etc. By using Portfolio Theory, banks can select investments that minimize portfolio volatility while still delivering profitable yields. This is especially crucial in unstable or inflationary environments like Nigeria, where macroeconomic shocks are common. Markowitz's insight helps banks understand that not all risk is harmful—only unsystematic risk can be diversified away. Thus, banks strategically manage systematic risk (e.g., interest rate fluctuations) while using diversification to buffer idiosyncratic risks (e.g., sector-specific downturns). Liquidity is essential for banks to meet withdrawal demands and loan disbursements. Portfolio Theory suggests that a portion of investments should be held in short-term, highly liquid assets (e.g., T-bills, repo agreements) to meet short-term obligations, while the rest can be invested in long-term, higher-yield instruments.

In Nigeria, banks operate in a volatile environment marked by exchange rate instability, fluctuating inflation, regulatory interventions by the Central Bank of Nigeria (CBN), and sector-specific credit risks. By applying Portfolio Theory: Nigerian banks can diversify investments across different sectors (agriculture, oil & gas, manufacturing, telecoms). They can use risk-adjusted models to decide how much to lend versus how much to invest in government securities. CBN-mandated instruments (e.g., open market operations, standing lending/deposit facilities) can be factored into the efficient portfolio design A bank with an optimized portfolio is more resilient to economic shocks and can maintain steady earnings, ensuring investor confidence and customer trust. Portfolio Theory offers a scientific framework for making investment decisions that balance risk and return. Its application in commercial banking ensures that institutions manage their asset portfolios in a manner that Enhances profitability, Mitigates risk exposure, Maintains regulatory compliance, Supports long-term stability. In Nigeria, where financial markets are exposed to multiple economic challenges, the principles of Portfolio Theory are essential for strategic asset management, especially in the pursuit of sustainable bank performance.

2.3 Empirical Review

Ajiboye, Bosun-Fakunle, and Emuze, (2025) appraised the influence of financial structure (long-term as well as short-term debts to equity ratios) on the market value (Tobin Q and share price) of listed banks. The objectives were to ascertain the extent of relationship between long-term debt to equity ratio as well as examine the impact of short-term debt to equity ratio on the market value of the banks. A research design employed was an ex post facto, and a purposive sampling technique was used to choose 12 banks that were listed and had intact data as at the period of investigation on the Nigerian Exchange Group. Secondary data of the variables were gotten from the annual reports as well as accounts of selected banks over a period of 12 years (2011 to 2022). Data sourced were analysed with descriptive together with inferential statistics. The outcomes revealed that long term-debt to equity ratio positively as well as significantly influence the market value.

Oseikhuemmhen, and Aigienohuwa, (2025) investigated the effect of financial information on shareholders' investment decisions among listed deposit money banks in Nigeria. The specific objective was to examine the extent to which leverage analysis, and profitability analysis affect equity shareholding. The selected research design was ex-post

facto. The study's population encompassed all thirteen (13) listed deposit money banks in Nigeria. The study employed a purposive sampling method to select ten deposit money banks, chosen based on the availability of financial reports and audit data. The data for this study were extracted from the published financial statements of the sampled banks, covering the period from 2013 to 2022. Ordinary Least Squares (OLS) technique was employed to test the hypotheses, complemented by descriptive statistical analysis. The findings revealed that leverage analysis has a significant positive effect on equity shareholding among listed deposit money banks in Nigeria.

Ojonugwa, Odi, & Usman (2025). examine the determinant of corporate finance decision on firms 'performance among Nigeria listed manufacturing small and medium enterprises. The OLS has been employed on as ample of conveniently selected 100 Nigeria listed manufacturing small and medium enterprises over the period of2018 to 2023. Financing decisions are measured through debt to equity and firm's performance measured through ROE, ROA, Tobin's Q and market capitalization. Our results show that corporate financing decisions have no significant impact on firm's performance among Nigeria listed manufacturing small and medium enterprises. The study concluded that size of the listed firms significantly influence financial decision.

Akpotor, Ezeabasili, & Chukwunulu, (2024) ascertain the relationship between profitability ratios and stock returns of deposit money banks in Nigeria for the period 2011-2022. The study used earnings before interest and tax, net profit margin, return on asset and return on equity as independent variables. While, stock returns of deposit money banks was used as the dependent variable. The study used secondary data obtained from the financial statement of sampled banks and the records of Nigeria Exchange Limited (NGX) for analysis. The orthogonal deviations option of Generalized Method of Moments (GMM) technique was employed for analysis of data. Findings from the analysis showed that, earnings before interest and tax has positive but no significant relationship, while there is negative and no significant relationship between net profit margin, return on asset and return on equity and stock returns of listed deposit money banks in Nigeria. This may be because, investors in Nigeria do not see retained earnings as part of their earnings.

Ifechukwu-jacobs, & Atueyi, (2025). Material management and productivity of Nigeria bottling appraised the material management and productivity of Nigerian Bottling Company. The population of the study was 288 staff. While two hundred and seventy (270) questionnaires were retrieved. The hypotheses were tested using regression analysis method at 0.05% level of significance. The findings of the study revealed, Planning has a

significant effect on productivity in Bottling Companies in Onitsha given its F-value of 14.027. Material procurement has a significant effect on productivity in Bottling Companies in Onitsha given its F-value of 33.048. Logistic has a significant effect on productivity in Bottling Companies in Onitsha given its F-value of 9.418. Stock and waste control has a significant effect on productivity in Bottling Companies in Onitsha.

Nwangwu, Ohanyere; Nwangwu & Atueyi, (2025) examined the effect of artificial intelligent (AI)on decision-making in supply chain management of lubricant firms in Anambra state, Nigeria. The study was anchored on Technology Acceptance Theory (TAT). A structure questionnaire was developed for data collection. The population of the study comprised of 281 management staff from thirteen (13)lubricant firms in Anambra State. Two hundred and sixty-nine (269) were duly filled and returned data was analysed using correlation analysis with the aid of statistical package for social science (SPSS) version 23.Findings from the study show that. Machine learning has significant effect on decision support system on supply chain management of lubricant firms in Anambra state (T=2.244, P=0.006). Neural networks hassignificant effect on creative decision skill on supply chain management of lubricant firms in Anambra state(T=9.790, P=0.009). The study concludes that AI-powered predictive analytics improved decision-making in supply chain management in lubricant firms in Anambra state, Nigerian. The study recommends that Firms should prioritize data collection, storage, and analysis. Technical expertise is critical for implementing and optimizing neural network algorithms. Firms should consider hiring experts or providing training to existing staff.

Onya, Arinze, & Atueyi, (2025) examined job satisfaction and employee's performance among the staff of private universities in Anambra state. The study investigated the relationship between reward, career development, staff training and recognition on employee performance. Relevant theoretical and empirical literatures were reviewed. The study was anchored on Herberg's throry. The study collected data from primary and secondary sources. The population of the study comprised 478 staff of private universities in Anambrastate. Formulated hypothesis were tested, using ANOVA. From the analysis, it was discovered that: Reward has significant effect on employee's performance amongst the staff of private universities in Anambra state**.** Career advancement has significant effect on employee's performance, amongst the staff of private universities in Anambra state. Training has significant effect on employees' performance amongst the staff of private universities in Anambra state. In view of the findings,

Ifechukwu-Jacobs, Stephen, Nwangwu, & Atueyi, (2025) analyzed the financial literacy and its impact on youth entrepreneurship in South East Nigeria. The objective of the study was to; ascertain the effect of financial knowledge, financial behaviour and financial expertise on youth entrepreneurship in South East Nigeria. Three research hypotheses are formulated in line with the above objectives of the study. Descriptive survey design method was used; Structured questionnaire were use to gather information from the population. The population of the study is made of youths from age 20-39 in South East zone of Nigeria, which is 50,222,32 target population. It comprises of all the youths in South East Nigeria, while the sample size is 399 were gotten through taro yamane formular. The researcher distributes three hundred and ninety-nine (399) questionnaires but onlythree hundred and seventy-three (373) copies of questionnaire were retrieved. Correlation and t-test method of data analysis was used to test the hypotheses. The finding of the study shows that; Financial knowledge has significant positive effect on youth entrepreneurship in South East Nigeria. Financial behaviour has significant positive effect on youth entrepreneurship in South East Nigeria.

Ntadom, Atueyi & Jacobs (2021). examined the effect of career development on organizational performance, a Study of selected higher institution in Anambra State Nigeria. The study was anchored on Self-concept theory of career development. As a cross-sectional survey the research design were used, a structured questionnaire instrument were developed and used for data collection by the researcher to which reflect such options as strongly agree, agree, undecided, disagree and strongly disagree, which is popularly referred as five (5) points likert scale. It was used to obtain information from the respondents. The population of the study comprised of 57, 710 students selected across the five south east states of Nigeria. A sample size of 399 students was drawn from the population, using Taro Yamane formular of which three hundred and forty-seven (347) copies of questionnaires were duly completed and returned; showing 96% response rate. Research hypotheses were tested using ANOVA regression analysis which was carried out with the aid of Statistical package for social science (SPSS) version 23. The study found that career development has significant effect on Organizational Performance.

Methodology

3.1 Research Design

Ex-Post Fact research design was employed for this study. An *Ex-post Facto* research determines the cause-effect relationship among variables. *Ex-post Facto* will seeks to find out the factors that are associated with certain occurrence, conditions, events or behaviours by analyzing past events or already existing data for possible casual factors (Kothari & Garg 2014).

3.2 Population of the Study

The population of this study consisted of the twenty-four (24) deposit money banks quoted on the Nigerian Exchange Group (NGX). The study will cover twelve years annual reports and accounts of these banks from 2012 to 2023.

3.3 Sample Size and Techniques

This study will selected ten (10) deposit money banks in Nigeria for the study. The banks will choose because of availability of data

Table 3.1: List of Quoted Deposit Money Banks on the Nigerian Exchange Group

1	Fidelity bank plc
2	FCMB plc
3	First bank plc
4	Access bank plc
5	United bank of Africa (UBA)
6	Eco bank plc
7	Sterling bank plc
8	Union bank plc

9	Zenith bank plc
10	Guarantee trust bank (GTB)

3. 4 Model Specification

A model was developed to verify financial decision and financial performance in Nigeria. The approach is to modify the model by specifying a multiple regression equation made up of financial decision as a function of the financial performance the study modified the work of Guanghui, et. al. (2024) examined the impact of financing decisions and ownership structure.

The model is stated thus:

$OCit = \beta\ 0 + \beta 1DFi + \beta 2EFi + e1i$ ----------(i)
Where:
OC= Ownership concentration
DF = Debt financing
EF = equity financing

The model will be modified to enable us look at the topic from another dimension. Thus we will state our modified model as:

The model to be regressed in this study will be presented in a relational form as follows

ROA =F (DER, EPS, DYR, CLR)----------(ii)

Where

ROA = Return on Assets

DER = Debt to equity ratio

EPS = Earnings per share

DYR = Dividend yield ratio

CLR = Capital labour ratio

F=Functional notation

$ROA=bo+b_1DER + b_2 EPS + b_3DYR + b_4CLR +u$---------- (iii)

Where

Bo= constant

βi-β4 is parameters to be estimated

3.5 Variable used and their Measurement

Category	Variables	Measures as	
Dependent Variable			
Return on Asset	ROA	Profit after Tax/Total Asset	Setiawan & Gestanti, 2022
Independent variable			
Debt to equity ratio	DER	Loans and Advances/ Total Assets	Olagunju, Adeyanju, and Olabode, (2011)
Earnings per share	EPS	Ratio of annual dividend per share and market price per share	Kakeeto, Timbirimu, Kiizah and Olutayo 2016
Dividend yield ratio	DYR	Actual income tax expense and dividing it by the company's actual net income..	Agbaja, Adelakun & Udi, (2016)
Capital-labour ratio	CLR	ratio of capital employed to labour employed	Sanyaolu, Job-Olatunji & Ogunmefun, (2018);

Source: Author's compilation (2023)

Data Presentation and Analysis

4.1 Descriptive Statistics Analysis

Table 4.2.1, which displays the number of observations, mean, standard deviation, minimum and maximum values of the explained variable, and each of the explanatory variables, provides the descriptive statistics for all the variables in the model. The descriptive data of the chosen service sector that comprise our sample are displayed in the table below.

	ROA	DER	EPS	DYR	CLR
Mean	0.194500	0.241167	0.133750	0.230000	0.222250
Median	0.210000	0.250000	0.120000	0.230000	0.235000
Maximum	0.440000	0.380000	0.240000	0.330000	0.470000
Minimum	0.010000	0.130000	0.090000	0.120000	0.110000
Std. Dev.	0.133781	0.046112	0.033608	0.046200	0.064852
Skewness	-0.173124	-0.213420	0.766149	-0.627426	0.471723
Kurtosis	1.597229	3.335362	2.399023	3.137231	3.957575
Jarque-Bera	10.43828	1.473303	13.54556	7.967429	9.035210
Probability	0.005412	0.478714	0.001145	0.018616	0.010915
Sum	23.34000	28.94000	16.05000	27.60000	26.67000
Sum Sq. Dev.	2.129770	0.253037	0.134412	0.254000	0.500493
Observations	120	120	120	120	120

Sources: Author's Computation (2025)

The table above indicates that the mean of return on assets (ROA) is .19% with standard deviation of .13% the minimum and maximum values of 1% and 44% respectively. The mean value of debt-to-equity ratio (DER) is 24% with standard deviation of 4% the minimum and maximum values of 13 and 38% respectively. The mean value of earning per share (EPS) is 13% with standard deviation of 3%, the minimum and maximum values of 09% and 24% respectively. Dividend yield ratio (DYR) mean value is 23% with standard deviation of 4%, the minimum and maximum values of 12% and 0.33 respectively. The mean value of capital labour ratio (CLR) mean value is at 22% with standard deviation of 6%, the minimum and maximum values of 11% and 47% respectively.

These results suggest that the data are not widely dispersed from the mean because the standard deviations of all the variables are less than the mean values. Also, the skewness value of all the variables is close to zero, it means that the distribution of the variables is symmetric in nature,. The Kurtosis values of all the variables is also closer to 3, it indicates that the shape is a normal distribution, except ROA. The P-value of Jarque-Bera test of all the variables is more than 5%, except leverage, However, Shao (2003) submits that normality of data does not in any way affect the inferential statistics estimate to the BLUE properties. (Best, Linear, Unbiased, Estimate)

4.2. Correlation Analysis

A square matrix that displays the correlation coefficients between two variables is called a correlation matrix. The strength and direction of a linear relationship between two variables are measured by correlation coefficients. Frequently used in multivariate analysis and statistics, a correlation matrix looks at the relationships between several variables. It is possible to assess the link between two variables by using a correlation matrix: A relationship is strong if the relationship value is 1. The relationship is neutral if the relationship value is 0. In the event that the relationship's value is -1, it is weak or negative.Therefore, in examining the association among the variables, we employed the Pearson correlation coefficient (correlation matrix) and the results are presented in the table 4.2 below.

	ROA	DER	EPS	DYR	CLR
ROA	1.000000	0.261230	0.238627	0.174439	0.075922
DER	0.261230	1.000000	0.192900	0.069423	0.158443
EPS	0.238627	0.192900	1.000000	0.209988	0.166510
DYR	0.174439	0.069423	0.209988	1.000000	0.065630
CLR	0.075922	0.158443	0.166510	0.065630	1.000000

Sources: Author's Computation (2025)

Return on assets is positively connected with three factors, debt to equity ratio (DER), earning per share (EPS), Capital labour ratio (CLR) and Dividend yield ratio (DYR), None of the factors, nevertheless, was discovered to be greater than 0.80. That is, no two exploratory variables had a perfect correlation. The highest correlation is between two variables which are highly correlated with (ROA/DER =0.26) which indicate that multi co linearity is not a serious problem that would distort the regression result in the model used for analysis. A close look at the value of the Pearson correlation coefficient results revealed that all the variables are strongly associated with return on assets.

Therefore, in checking for multi-collinearity problem, the study noticed from the correlation table above that no two explanatory variables were perfectly correlated and thereby ruled out the case of having an outlier. This indicates the absence of multi-collinearity problem in the model used for the analysis. This also justifies the use of the Panel Least Square (PLS)

4.3 Test of Hypotheses and Discussion of findings

In order to examine the relationship between the dependent variable (Return on Assets) and the independent variables (DER, EPS, DYR, CLR) and to test the formulated hypotheses, we employed a Panel Regression Analysis since the data had both time series (2012-2023) and longitudinal properties (10 quoted Bank) our analysis is presented in table 4.3 below

$$ROA_{it} = \beta 0+\beta_1 DER_{1t}+\beta_2 EPS_{1t}+\beta_3 DYR_{1t}+\beta_4 CLR_{1t} + \varepsilon \ldots\ldots\ldots\ldots 1$$

Table 3 Robust Random Effect Model

Dependent Variable: ROA

Method: Panel Least Squares

Date: 05/30/25 Time: 10:13

Sample: 2012 2023

Periods included: 12

Cross-sections included: 10

Total panel (balanced) observations: 120

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.105904	0.071971	1.471471	0.1445
DER	-0.079435	0.201995	-0.393252	0.6950
EPS	0.237470	0.267524	3.887656	0.0000
DYR	0.096588	0.174348	2.553998	0.0009
CLR	0.241964	0.126167	2.917809	0.0001

Effects Specification

Cross-section fixed (dummy variables)

Period fixed (dummy variables)

R-squared	0.746775	Mean dependent var	0.194500
Adjusted R-squared	0.682803	S.D. dependent var	0.133781
S.E. of regression	0.075346	Akaike info criterion	-2.150413

Sum squared resid	0.539310	Schwarz criterion	-1.569685
Log likelihood	154.0248	Hannan-Quinn criter.	-1.914577
F-statistic	11.67338	Durbin-Watson stat	1.762554
Prob(F-statistic)	0.000000		

Sources: Author's Computation (2025)

A weighted Statistics for adjusted R-squared value of 0.746775 and a weighted R-squared value of 0.682803 were given in Table 4.4. This graph indicates that around 68% of the variances in the tested companies' performance might be attributed to the investment ratio used in the study. The probability value of 0.0000 and the F-statistic of 11.67338 show how well the regression model describes the data. Once more, the model shows that it is still very statistically significant even at 5% levels. In the meantime, the Durbin Watson estimate of 1.762554 shows that autocorrelation has little effect on the model. This suggests that the model is fit for prediction. It is on these bases that, each of the research hypothesis postulated in earlier chapter of this research were tested in the next section of this chapter.

4.4. Test of Hypotheses

Ho1: Debt to equity ratio has no significant effect on performance of deposit money banks in Nigeria

The regression result in table 4.4 reported a coefficient value of -0.079435, t-statistics value of -0.393252 which is lesser than 1.96 benchmark and a probability value of 0.6950 which is greater than 5% level of significance but lower than 95% confidence level. By implication, the probability value which is greater than 5% level of significance but less than 95% confidence level shows that the Debt to equity ratio has no significant effect on performance of deposit money banks in Nigeria. It is on this basis; the study accepts the null hypothesis one and rejects the alternate hypothesis. As such, the study reaffirmed that; Debt to equity ratio has no significant effect on performance of deposit money banks in Nigeria.

Ho2: Earning per share has no significant effect on performance of deposit money banks in Nigeria

The regression result in table 4.4 reported a coefficient value of 0.237470, t-statistics value of 3.887656 which is higher than 1.96 benchmark and a probability value of 0.0000 which is less than 5% level of significance but greater than 95% confidence level. By implication, the probability value which is less than 5% level of significance but greater than 95% confidence level shows that Earning per share has significant effect on performance of deposit money banks in Nigeria. It is on this basis; the study rejects the null hypothesis two and accepts the alternate hypothesis two instead. As such, the study reaffirmed that; Earning per share has significant effect on performance of deposit money banks in Nigeria

Ho3: Dividend yield ratio has no significant effect on performance of deposit money banks in Nigeria.

In the case of hypothesis three, the regression result in table 4.4 reported a coefficient value of 0.096588, t-statistics value of 2.553998, which is higher than 1.96 benchmark and a probability value of 0.0009 which is lower than 5% level of significance but greater than 95% confidence level. By implication, Dividend yield ratio has significant effect on performance of deposit money banks in Nigeria.., within the periods under review. It is on this basis; the study rejects the null hypothesis three which states that Dividend yield ratio has significant effect on performance of deposit money banks in Nigeria..

Ho4: Capital-labour ratio has no significant effect on performance of deposit money banks in Nigeria

In the case of hypothesis three, the regression result in table 4.4 reported a coefficient value of 0.241964, t-statistics value of 2.917809, which is higher than 1.96 benchmark and a probability value of 0.0001which is lower than 5% level of significance but greater than 95% confidence level. By implication, Capital-labour ratio has significant effect on performance of deposit money banks in Nigeria, within the periods under review. It is on this basis; the study rejects the null hypothesis three which states that Capital-labour ratio has significant effect on performance of deposit money banks in Nigeria

Conclusion and Recommendations

5.1: Conclusion:

The results shown in this study revealed that the main investment ratio that is of paramount importance to the deposit money banks in Nigeria is the investment decision. Also, investment ratio of the banks has potential to reduce the profit of the banks if not addressed. More importantly the importance of investment ratio in performance of deposit money is very crucial for future progress and development and success. In conclusion, the investment ratio and performance of deposit money banks (DMBs) in Nigeria are highly influenced by a variety of factors, including macroeconomic conditions, government policies, market competition, and technological developments. DMBs in Nigeria have been generally successful in maintaining their financial performance, despite facing numerous challenges. However, they must continue to adapt to changing market conditions and regulatory requirements to remain competitive and profitable. Banks should develop robust risk management strategies to mitigate potential losses and safeguard their financial

5.2: Recommendations

On the basis of the findings, the study recommends among others that:

i Debt to equity ratio has insignificant effect on return on Assets, the study as well recommend that ii. The study found that Debt to equity ratio has no significant effect on the firm value, management should focus on optimizing the Debt to equity ratio while balancing it with investment opportunities that yield higher returns.

ii. Earnings per share has significant effect on return on Assets, the study recommend that Companies can increase EPS by repurchasing their own shares, which can lead to a temporary increase in EPS. It is important to consider share buybacks when evaluating EPS.

iii. Dividend yield ratio has significant effect on return on Assets; firms should consider all the factors that affect dividend per share when formulating policy, in order to have an optimal policy that satisfies its shareholders and other interested third party.

iv. Capital-labour ratio has significant effect on return on Assets, It was recommended that Investing in technology and equipment can improve efficiency and reduce the need for labour. However, it is important to ensure that these investments are cost-effective and provide a return on investment.

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