

## Effect of Portfolio Diversification on Financial Performance of Deposit Money Banks (DMBS) in Nigeria

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### Abstract

The study examines the effects of portfolio diversification on the financial performance of Nigerian deposit money banks (DMBs). One of the specific objectives of the study was to investigate sectoral credit diversification, income stream diversification, deposit diversification, and investment diversification as proxies for portfolio diversification and the financial performance of Nigeria's deposit money banks (DMBs) using return on equity. For a period of twenty three years (23), from 2000 to 2022, data was obtained from the yearly financial statements of six precisely chosen Nigerian deposit money organizations. Samples of six (6) deposit money banks were chosen using the purposive sampling technique. An ex-post facto research design was employed in the study. With the aid of E-views 10, panel least squares regression is used to evaluate secondary source data taken from these banks to examine the formulated hypothesis. The results of the study's data analysis revealed that sectoral credit diversification and deposit diversification significantly improved the financial performance of deposit money banks in Nigeria, whereas income stream diversification and investment diversification have the opposite effect. The study comes to the conclusion that the two positive variables, SCD and DPD, are good indicators of deposit money institutions' financial performance. According to the report, portfolio diversifications at banks should be carefully designed in order to protect the interests of equity holders, other stakeholders, and the institutions' financial needs. Therefore, it should be possible to provide a stable economic and political environment to improve the financial performance of listed organizations, especially banks.

Keywords: **Portfolio diversification, treasury bills, ordinary shares, stakeholders, financial performance.**

### Introduction

The strategic management of a company must include a diversification plan, and managers and scholars are very interested in how this approach affects the company's financial performance. (Sulaimon, Ogunkoya, Lasisi, & Shobayo, 2015). Businesses will seek to participate in diversification to mitigate the risk associated with their existing sectors if their products or services are threatened by environmental uncertainty or the decreasing phase of their life cycle curve. The expansion of a company's product line and activities into new markets where profitability is higher

and environmental uncertainty is less can help a company affirm its survival, making its cash flow more dependable (Nwakoby&Ihediwa, 2018). Business organizations are compelled to adopt new innovations in order to stay ahead of competitors because of the fierce competition, technological advancements, and numerous other problems that erode their profit levels. Many organizations all around the world have adopted diversification as one of their methods to further their commercial goals. Diversification is one of the ways that most businesses consider adding value, according to global surveys. Businesses can operate in many economic markets and branch out into company lines that are different from their current activity thanks to diversification methods (Marinelli, 2015). Investment in one industry increases the value of the resources in another organisations diversify to produce positive spillover effects. When a company diversifies into a new sector, that sector must offer greater returns on investment. Diversification is still a good strategy, especially for a company in an unappealing industry, even though many strategists advocate for businesses to focus on their core competencies (David, 2013).

In a broader sense, financial performance refers to how far financial goals have been achieved and is a crucial part of risk management. Finding out how a company's operations and policies will affect its bottom line is the process of doing so. Businesses have been forced to create performance-improving strategies as a result of consumers' growing desire for product variety and their ongoing product replacement. Even though the business environment has potential, organisations nonetheless face threats that hinder their performance and make it more difficult for them to survive (Schommer et al., 2019). A sort of corporate strategy for a firm is diversification (Oladimeji&Udosen, 2019). By obtaining bigger sales volumes through an extended manufacturing line, new products, and new markets (Fateme et al., 2015). Not all diversified organisations are successful, and diversification does not always result in better performance. Diversified firms' performance deteriorates over time, and managers who devise diversification strategies find it increasingly difficult to avoid negative performances (Williamson, 1985). Corporate diversification strategies, whether in product lines, subsidiaries, revenue, or regional lines, are essential for businesses to compete successfully and endure over the long term. The bulk of empirical investigations found a connection between corporate performance and diversification. However, the bulk of diversification initiatives used in Nigerian public enterprises result in low substandard performance due to management's self-interest, inexperience, ineptitude, and opportunistic behaviour.

With increased non-performing loan rates, inadequate capitalization, poor asset quality, inefficiencies, and high operational costs, as well as rising risk levels due to low liquidity, Deposit money banks have continued to perform their general function of financial intermediation in an ineffective and unproductive manner. It has been observed that shifts in the banking sector's overall performance have a significant impact on the overall state of the economy.

Numerous regional and worldwide studies have tackled bank portfolio diversification in a piecemeal fashion without its effect on financial performance. For instance, credit diversification was studied by Mulwa (2018) and Meressa (2017). In his 2008 study, Lomuto explored deposit diversification. Income diversification was explored by Teimet, Ochieng, and Anywa in 2011 and Kiweu in 2012. Rop et al.'s (2016) researched on diversification of investments. Mulwa (2018) also studied portfolio diversification on return on equity. As a result, it is necessary for this work to investigate how these variables affect the deposit money banks in Nig's financial performance. The primary objective of the study is to ascertain how bank portfolio diversification strategies affect the financial success of Nigerian deposit money banks. The study's specific objectives are to:

i. Ascertain how sectoral credit diversification affects the financial success of Nigerian deposit money banks.

- ii. Assess how income sources affect the link between portfolio diversity and the financial success of Nigerian deposit money institutions.
- iii. Determine the impact of deposit diversification on the financial health of Nigeria's deposit money institutions
- iv. Investigate the impact of investment diversification on the deposit's financial performance.

### **Literature Review**

Diversification was initially grasped in its current form through the work of Harry Markowitz in the 1950s. Diversification is a corporate strategy that entails developing a new product for the target market while simultaneously growing into sectors or industries in which the company does not already compete. This risk management technique combines a variety of investments. Financial diversification is the process of arranging resources in such a way that exposure to any one asset or risk is reduced. It is a risk-reduction strategy that divides investments among numerous financial products, sectors, and other classifications. Diversification is a typical strategy for minimising risk or volatility, which can be achieved by investing in a variety of assets. Every economy is constructed on the banking sector, and healthy, functioning economies necessitate a diverse, prosperous, and stable financial system (Nisar et al. 2018). Despite the banking industry's significant role in Nigeria, there is a very low level of domestic credit and banking concentration due to an increase in non-performing loans, which has the unintended consequence of increasing loan defaults, poor banking practises, noncompliance with banking regulations, and unstable political and economic conditions. As a result, deposit money institutions must adjust their operational strategy to focus on alternative revenue sources, modify the composition of their revenues by diversifying into industry-related enterprises, and enable money movement between surplus and deficit units.

### **Portfolio Diversification**

Portfolios contain equities and bonds. Portfolio diversification lowers risk and boosts returns (Agblobi, Kuhorfah, & Asamoah, 2020). It allows investors to diversify between investment possibilities. Purkayastha, Manolova, and Edelman (2012) contends that portfolio management is embarked upon to maximise profit at a particular risk tolerance, strengths, weaknesses, opportunities, and hazards matter. Portfolio management organises important procedures and decisions to help create large hierarchical changes.

Diversification distributes risk and return within asset classes because it's hard to predict which subset will outperform. Thus, diversification reduces investment risk by adding assets. Diversification enhances returns and lowers risk, therefore developed country portfolio managers are increasingly interested in banking investments (Purkayastha et al., 2012). Diversity enhances developing nation financial systems, according to Chakrabarti, Singh, and Mahmood (2007).

There is a very significant issue because of the increase in investment portfolios brought on by rising bank liabilities. The field of portfolio management has a lot of potential for expansion, both nationally and internationally. In an ideal world, everyone would have financial plans for the short and long term to help them make decisions, but in Ghana, the majority of bank clients rarely do. Because diversification is a risk-management strategy, universal banks have trouble sustaining a portfolio. The biggest issue affecting the operational environment of the portfolio funds is risk, but there are other issues as well. Risk is the unpredictable nature of a portfolio's returns due to unanticipated events. Investors in the universal bank have a range of risk tolerances.

In order to reduce exposure to business threat, portfolio diversification, according to O'Sullivan and Sheffrin (2016), comprises strategic capital allocation that is carried out effectively and efficiently.

The writers continued by saying that by investing in a variety of investment possibilities across unrelated industries, portfolio diversification aims to lessen exposure to unpredictability.

### **Diversification of deposits**

According to Rose and Hudgins (2016), deposit diversification comprises using bank funds to purchase a variety of assets with varying maturities. The maturity term of the class of securities must correspond to how deposits are employed as investments. Long term deposits are utilised for long-term capital market securities, whilst short term deposits are used for short-term money market products. According to the writers, matching deposits against each security's maturity period will help to reduce the risk associated with accepting client withdrawal and loan requests. Receiving low-interest deposits from private residents, businesses, or the government, according to Rose and Hudgins (2016), can result in a novel method of deposit diversification. It can also be produced by categorising depositors' money into time, savings, or demand deposits in order to match the type of asset to be invested in.

### **Credit diversification**

Credit diversification is a strategy used by banks to lower the risk of customers or borrowers not repaying loans by distributing deposits among several groups or classes of credit facilities or creating new credit facilities, according to Jahn, Memmel, and Pflingsten's contribution (2019). The researchers propose that other strategies, like specialised lending, customer screening, qualification of consumers based on their loan requests, and making sure that correct credit risk administration is carried out, could be utilised to keep the bank's liquidity stable.

### **Portfolio diversification to asset categories**

When diversifying the portfolios, fund managers or investors must use available resources outside of a specific class of securities or investment opportunity. They must also choose how much of the available funds should go to each type of investment opportunity. Following are some examples of products into which investors can diversify:

- i. Stocks or other stock in a publicly traded company or a privately held company;
- ii. Debt securities like corporate or government fixed income; and
- iii. Land, buildings, natural resources, infrastructure, agriculture, cattle, water, solid minerals, etc.
- iv. Money market instruments, Treasury Bills, CDs, and other short-term cash equivalents.

**Banks with varied portfolios prevent excessive risk concentration:** It is important to control lending risk throughout the entire credit administration process. This is essential because different loans respond to various market conditions. Other loans that perform better during the same time period will compensate for the poor performance of others. As a result, diverse portfolios can be extremely strong even if some loans perform poorly.

### **Financial Performance (Profitability)**

Financial performance is gauged by profitability (Oditia, Ehiedu, & Kifordo, 2020). It is determined as the difference between revenue and outgoing costs. It is one of a corporate organization's main goals. The term "profit" is the root of profitability, and numerous academics have demonstrated how imprecise this word is. Profitability ratios are computed to represent the business's operational effectiveness. The interests of other stakeholders, in addition to management, include the profitability of the company. As a result, It would be reasonable to think that managers of prosperous

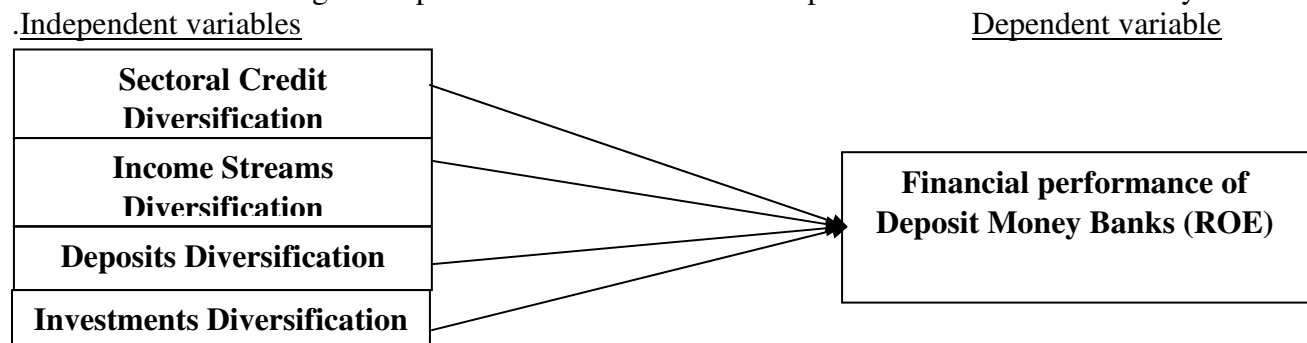
organisations would be motivated to divulge more information in order to distinguish themselves from others who are less prosperous. According to Pandey (2020), profitability can be assessed in relation to sales or investment. It is mostly assessed using ratios such the operating margin, return on equity (ROE), return on assets (ROA), net profit margin, and gross profit margin.

**Investment Portfolios and Financial Performance of Deposit money banks**

Portfolio selection is an excellent example of sequential decision-making in uncertain settings. While making investments in the midst of an uncertain future, investors must carefully assess their attitudes towards risk and return. Creating a broad portfolio is the best way to protect against fluctuations in the returns of various investment opportunities. Diversifying a company's portfolio doesn't guarantee strong earnings due to investment risk. Banks evaluate portfolio risk to optimise earnings (Agblobi et al., 2020). Insurance firms can overcome underwriting losses and make money by investing in insurance, claim Oyatoye and Arilesere (2012). The firm's liabilities section contains shareholders' interest, which must be properly assessed for insurance investment management risk, claims, etc. Mukti (2012). Insurance fund managers confront risks that typical fund managers do not.

**Conceptual framework**

The researcher's conceptualization of the relationships among the study's variables is reflected in the framework. The diagram depicted below serves as a conceptual framework for this study



*Source: Researcher Conceptualization 2023*

The conceptual framework illustrates the interrelationships of the analysed factors. Diversifying one's sources of credit, income, deposits, and investments are the independent variables here. Return on assets and return on equity are the dependent variables.

**Financial Intermediation and Delegated Monitoring Theory**

Diamond (1984) theory of financial intermediation and delegated monitoring will serve as the study's framework. The lowering of costs connected with supplying data that may be used to address incentive-related concerns was the cornerstone of financial intermediation theory, with banking institutions sharing the benefits of lower gross cost data acquisition. This idea proposed two approaches to diversification: risk addition by expanding the activities of a single intermediary and risk sharing by increasing the number of intermediary agents.

Khalid (2012) applied a multiple regression model to the study of the effect of "asset quality on private banks' profitability in India" to ascertain whether or not the quality of a bank's assets is correlated with its operational success. His study showed that the poor asset ratio of a bank is negatively correlated with its size, traditional banking industry concentration, and the percentage of idle funds. Higher quality loan processing methods prior to loan approval were found to improve a

bank's operational performance, as hypothesised. This would mean less time and effort is spent on processes that aren't necessary to make risky loans possible.

Opoku, Angmor, and Boadi (2016) evaluated the effectiveness of the goods offered by Ghanaian commercial banks. They gathered information for their study from 20 commercial banks in Ghana that were open between 2009 and 2013. The hypotheses were evaluated using analysis of variance and ordinary least squares regression. According to the results, commercial bank loans generate the highest return on investment. The lowest ROI is found in the areas of consultation and deposits. Financial performance is positively correlated with ROI at the 5% level of significance, with the highest variance being seen in loans (87.6%) and the second largest being seen in investment products (63.2%). Consulting and bank deposits were found to have significant effects on commercial banks' bottom lines.

Eric (2016) used information from the annual reports of ten universal banks in Ghana from 2007 to 2013 to investigate how the quality of a loan portfolio affects a bank's performance. The data analysis included STATA and the panel regression approach. Loan portfolio profitability (LPP) and the ratio of gross loan advances to loan loss provisions (LLP/GLA) were used to analyse the quality of the loan portfolio, and return on equity and net interest margin were used to evaluate the financial performance. Among the controls were the Cost Income Ratio, the Liquid Funds to Total Assets, and the Total Assets. The selected institutions' financial performance was negatively impacted by the LLP/GLA but favourably affected by the net interest margin. Ghanaian foreign banks gain from economies of scale, but the cost-to-income ratio has a detrimental effect on profitability.

## **Methodology**

The study used an ex post facto research approach to examine the effect of portfolio diversity on the financial performance of Nigerian deposit money institutions. Six deposit money banks in Nigeria were used as the sample size, and the deposit money banks in Nigeria made up the study's population. Using deliberate random sampling, six deposit money banks in Nigeria were selected as samples. The data for this study was acquired during a 23-year period, from 2000 to 2022, from the annual financial reports of the sampled institutions. Since both dependent and independent variables are anticipated to be presented in the financial statement, the data for all the variables used is available in annual reports. The variables extracted from the financial reports are sectoral credit diversification, income stream diversification, deposit diversification, investment diversification and return on equity.

## **Model Specifications**

The study investigated the effect of portfolio diversification on the financial performance of deposit money banks in Nigeria. Masoy et al. (2015) was adopted and modified.

The model of this study is written as:

$$ROE = f( SCD, ISD, DPD, BID )$$

$$ROE = \beta_0 + \beta_1 SCD + \beta_2 ISD + \beta_3 DPD + \beta_4 BID + \mu_t$$

Where:

SCD = Sectoral Credit Diversification

ISD = Income Streams Diversification;

DPD = Deposit Diversification;

BID = Investments Diversification

$\beta_0$  = Constant of the coefficient

$\beta_1$ -  $\beta_4$  = Control Variables.

$\mu t$  = error term

## Results and Discussion of findings

### Descriptive Statistics

	SCD	ISD	DPD	BID	ROE
Mean	10112.79	5205.785	4109.794	14528.06	139914.7
Median	7587.160	3318.950	1805.875	4369.050	43605.74
Maximum	52621.28	83748.67	21876.78	162956.6	1195148.
Minimum	1062.750	423.2500	309.2300	239.4500	7062.750
Std. Dev.	10797.83	10085.41	4783.264	22165.56	248628.5
Skewness	1.944274	6.762222	1.793161	3.774524	2.922527
Kurtosis	6.705994	52.22780	5.593707	1.231281	10.83153
Jarque-Bera	165.9173	14986.15	112.6369	2681.183	549.1112
Probability	0.003200	0.002100	0.004100	0.055000	0.001200
Sum	1395565.	718398.3	567151.6	2004873.	19308234
Sum Sq. Dev.	1.60E+10	1.39E+10	3.13E+09	6.73E+10	8.47E+12
Observations	138	138	138	138	138

*Source: Researcher's computation E- view 10(2023)*

The data ranges from 2000 to 2022. The total number of observations for each variable is 138. The table above disclosed that average mean and median values of Return on Equity (ROE) for the period examined are 139914.7 and 43605.74 respectively. The standard deviation of the period is 248628.5. The ROE ranges from a maximum of 1195148 to a minimum of 7062.750. The Return on Equity (ROE) skewness value is 2.922527, which indicates that the data is positively skewed. The kurtosis value of ROE is 10.83153; the reported value is higher than normal kurtosis of 3. This means that the data is clearly leptokurtic. The Jarque-bera and p-value of ROE for the period are 549.1112 and 0.001200 respectively. The p-value of Jarquebera (0.001200) is lesser than significant level (0.05). Therefore, the study will reject null hypothesis. In addition, the tables shown that mean and median values of Sectorial Credit Diversification (SCD) for the period under reviewed in the study are 10112.79 and 7587.160 respectively. The standard deviation of SCD is 10797.83. The maximum and minimum values are 52621.28 and 1062.750 respectively. The skewness value of SCD is 1.944274 and this value suggests that data is positively skewed. The kurtosis of SCD for the period is 6.705994 and the value is higher than normal kurtosis of 3. This means that data distribution is leptokurtic. The Jarquebera and p-value of SCD are 165.9173 and 0.003200 respectively. The p-value of Jarque-bera statistic (0.003200) is lesser than significant level (0.05). Therefore, the study will reject the null hypothesis. Furthermore, the study discovered that average and median value of Deposit Diversification (DPD) are 4109.794 and 1805.875 respectively. The standard deviation of DPD for the period is 4783.264. The maximum and minimum values of DPD distribution are 21876.78 and 309.2300 respectively. The skewness of DPD of the period is 1.793161 and it means that data distribution is positively skewed. The kurtosis value of 5.593707 and the value is higher than normal kurtosis of 3. This means that data distribution is leptokurtic. The Jarquebera and p-value of DPD are 112.6369 and 0.004100 respectively. The p-value of Jarque-

bera statistic (0.004100) is lesser than significant level (0.05). Based on this statistical result, the study will reject the null hypothesis. Furthermore, the study discovered that average and median value of Income Stream Diversification (ISD) are 5205.785 and 3318.950 respectively. The standard deviation of ISD for the period is 10085.41. The maximum and minimum values of ISD distribution are 83748.67 and 423.2500 respectively. The skewness of ISD of the period is 6.762222 and it means that data distribution is positively skewed. The kurtosis value of 52.22780 and the value is higher than normal kurtosis of 3. This means that data distribution is platykurtic. The Jarquebera and p-value of ISD are 14986.15 and 0.002100 respectively. The 0.002100 p-value of the Jarque-bera statistic is lower than the 0.05 threshold required for statistical significance. The investigation will conclude that the null hypothesis is false based on these statistical findings. Finally, table revealed that average and median values of Investment Diversification (BID) are 14528.06 and 4369.050 respectively. The standard deviation of BID is 22165.56. The maximum and minimum values are 162956.6 and 239.4500 respectively. The skewness value of BID for the period is 3.774524. This value means that the data is positively skewed. The kurtosis value of BID is 1.23128 and this reported value (1.23128) is lesser than normal kurtosis of 3. This value means that the data distribution is platykurtic. The jarquebera and p-value of BID are 2681.183 and 0.055000 respectively. (0.055000) is higher than significant level (0.05). Based on this statistical result, the study will accept the null hypothesis.

**Table 4.1.2: Correlation Analysis**

	SCD	ISD	DPD	BID	ROE
SCD	1.000000	0.450885	0.051612	0.449154	0.378282
ISD	0.450885	1.000000	0.099137	0.719838	0.165459
DPD	0.051612	0.099137	1.000000	-0.041169	0.492461
BID	0.449154	0.719838	-0.041169	1.000000	0.301888
ROE	0.378282	0.165459	0.492461	0.301888	1.000000

*Source: Researcher’s Computation E-view 10 (2023)*

The dimension of link between independent variables and dependent variables (ROE) is shown in table 4.1.2. The correlation coefficient between Sectorial Credit Diversification and ROE is 1.000000, indicating a very strong positive relationship between the two variables. Similarly, the correlation coefficient between value of Income Stream Diversification and ROE is 0.450885, indicating that the two variables are positively related. Deposit Diversification and ROE have a correlation coefficient of 0.051612, indicating a positive relationship between the two variables. Finally, the correlation coefficient between Investment Diversification and ROE is 0.449154, indicating that the two variables are also positively correlated.

**Table 4.1.5**

Dependent Variable: ROE  
 Method: Panel Least Squares  
 Date: 09/03/23 Time: 12:00  
 Sample: 2000 2022  
 Periods included: 23  
 Cross-sections included: 6  
 Total panel (balanced) observations: 138



Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	70581.37	30623.41	-2.304818	0.0228
SCD	11.46853	2.180587	5.259376	0.0000
ISD	-1.468531	4.150669	-0.353806	0.7241
DPD	30.80887	4.095869	7.521936	0.0000
BID	-1.683358	3.089095	-0.544936	0.5867

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.798547	Mean dependent var	139914.7
Adjusted R-squared	0.770319	S.D. dependent var	248628.5
S.E. of regression	162976.1	Akaike info criterion	26.91030
Sum squared resid	3.40E+12	Schwarz criterion	27.12242
Log likelihood	-1846.811	Hannan-Quinn criter.	26.99650
F-statistic	21.20461	Durbin-Watson stat	1.622970
Prob(F-statistic)	0.002100		

Source: Researcher’s computation E- view 10 (2023)

Dependent Variable:

ROE

$$ROE = \beta_0 + \beta_1 SCD + \beta_2 ISD + \beta_3 DPD + \beta_4 BID + \mu t$$

The above model equation indicate will shows the increase (positive) or decrease (negative) between the constant and the independent variables.

$$ROE = 70581.37 + 11.46853 (SCD) - 1.468531 (DPD) + 30.80887 (ISD) - 1.683358 (BID) + \mu t$$

**Interpretation**

Increased Sectoral Credit Diversification (SCD) will significantly boost Return on Equity (ROE), according to the coefficient value of 70581.37 (ROE) + 11.46853 (SCD). It went on to explain that Sectoral Credit Diversification (SCD) and Return on Equity (ROE) have a positive link. The ratio of 70581.37 (ROE) to -1.468531 (ISD) indicates that a reduction in income stream diversification will result in a considerable decline in return on equity. This indicates a bad correlation between Return on Equity (ROE) and Income Stream Diversification (ISD). The relationship between the coefficient values for Return on Equity (ROE) and Depreciation Per Dollar (DPD) shows that increasing Deposit Diversification (ISD) will significantly boost Return on Equity (ROE). This indicates that Deposit Diversification (DPD) and Return on Equity (ROE) have a favourable relationship. The relationship between the two variables, 70581.37 (ROE) - 1.683358 (BID), indicates that a reduction in investment diversification (BID) will result in a sizable decline in return on equity (ROE). This indicates a bad correlation between Return on Equity (ROE) and Investment Diversification (DPD).

**Interpretation of Coefficient of Determination**

An R-Square of 0.798547 and an Adjusted R-Square of 0.770319 are shown in Table 4.1.5. The determinants of sectoral credit diversity, income stream diversification, deposit diversification, and investment diversification account for 77% of the variance that positively and significantly affect

return on equity, according to the adjusted R-Square statistic. This indicates that there is effect or movement on the deposit money bank's financial performance in Nigeria, while the remaining 23% of the variability might be accounted for by variables or factors that weren't included in the models.

#### ***Interpretation of Durbin Watson Statistic***

The reported DW statistic of the multi-linear regression is 1.622970. The DW statistic is lesser than 2. This means that there is auto correlation among Sectorial Credit Diversification, Income Stream Diversification, Deposit Diversification, Investment Diversification and Return on Equity (ROE).

#### ***Interpretation of F-Statistic***

The panel regression result shows that, for the study's test data, the f-statistic and p-value are, respectively, 21.20461 and 0.002100. The f-statistic's p-value is less than (0.05), which is the required level of significance. Conclusions of the study demonstrate that diversification of sectoral credit, diversification of revenue sources, diversification of deposits, and diversification of investments all influence return on equity (ROE). This demonstrates that the explanatory parameters included in the study are sufficient to predict how portfolio diversification will affect the financial performance of Nigerian deposit money institutions.

#### **4.4 Discussion of Findings**

According to the study, sectorial credit diversification and ROE have 11.46853 correlation coefficient, which indicates a positive relationship between the two variables. Furthermore, income stream diversification and ROE have a -1.468531 correlation coefficient, which indicates a negative relationship between the two metrics. Deposit diversification and ROE have a substantial positive link, as seen by their correlation coefficient of 30.80887. Finally, According to the coefficient of correlation, deposit diversification and Return on Equity have a negative relationship with coefficient value of -1.683358.

#### **Conclusion**

The primary objective of this study is to investigate how portfolio diversification affects the financial performance of Nigerian deposit money institutions. Between 2000 and 2022, the population was reflected in all deposit money institutions listed on the Nigerian Stock Exchange. The annual report of the selected six (6) banks provided the financial data. Based on the result of the hypotheses tested in chapter four, Regression analysis findings (fixed effect panel) the study concluded that sectorial credit diversification and The findings also indicated that investment and income stream diversification have a detrimental effect on the financial performance of Nigerian deposit money institutions. The financial performance of Nigeria's deposit money institutions is significantly improved by deposit diversification. It also demonstrated the existence of long-term relationships among the factors used to forecast the financial success of DMBs in Nigeria. It showed how portfolio diversification can minimise risk for DMBs while also ensuring their financial stability and survival. This serves as a reminder to Nigerian deposit money banks to invest in asset portfolios that will provide favourable returns in order to meet the overall objectives of all stakeholders in the country's banking sector.

#### **RECOMMENDATIONS**

The following recommendations were made in light of the study's results and conclusions.

- i. With a view to improving performance, deposit money banks in Nigeria should diversify their holdings by making investments in foreign assets and subsidiaries as well as treasury bills, the purchase of common shares in quoted companies, investments in subsidiaries, and investments in foreign assets.
- ii. The government should pursue monetary policies through the Central Bank of Nigeria that would enhance bank diversification through efficient supervision and regulation.
- iii. The study further advises banks to seek out more information regarding whether the adoption of insurance products will result into an increase in fee-based income, also whether selling insurance products through the bank promotes bank efficiency and improves portfolio performance, at the same time increases commission income, non-interest income, and shareholder value.
- iv. Given that the majority of bank portfolio managers were unsure of whether mobile banking had any effect on financial performance, banks should conduct additional empirical study on the effect of mobile banking on their financial performance.
- v. Given that real estate investment has a big effect on deposit money banks' financial performance, the real estate financing strategies will make them more accessible to clients.
- vi. Political changes play a significant role in the stock market. It determines how well a company performs. Therefore, it should be possible to create a stable economic and political environment in order to improve the financial performance of banking institutions.

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