DETERMINANTS OF PROFITABILITY OF DEPOSIT MONEY BANKS IN NIGERIA

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ABSTRACT

This study examined determinants of profitability of listed deposit money banks (DMBs) in Nigeria from 2013 to 2022 financial years. The study specifically probed the roles of capital adequacy ratio and non-performing loans on profitability of DMBs. The study used return on asset to represent profitability. Twelve listed DMBs in Nigeria, which is the entire population was studied. The technique of data analysis is panel data regression while the source of data is secondary. The results showed that capital adequacy ratio has positive significant impact on profitability of DMBs; while non-performing loan has a negative significant impact on profitability. The study concludes that capital adequacy and non-performing loans play essential roles in the profitability of DMBs; and recommends that in order to increase their profitability, DMBs, their regulators and policy makers should make policies capable of reducing the level of non- performing loans; while management of DMBs should maintain an optimum level of capital adequacy so as to remove difficulties associated with meeting their financial obligations.
Keywords: Capital adequacy ratio, non- performing loans, profitability, deposit money banks

INTRODUCTION

Profitability is vital to businesses, irrespective of industry (Moussa et al., 2022). This is because profitability is antecedent to increased capital base, expansion and growth of a business. For banks, profitability indicates that they are able to manage risk and handle capital growth, that they can compete favourably and measure the quality of management (Hallunovi & Miranda, 2018). The economy of a country depends on financial institutions. In order to create money, banks lend excess money to borrowers.

Profitability measures the efficiency of banks and the extent to which they have provide valuable services to their customers. The key objective of any business is to make profits for owners (Andow et al., 2017). A firm that does not generate sufficient profits cannot survive in the long run. Thus, profitability is an issue of concern and interest thing to shareholders.

Management is saddled with the responsibility of running the affairs of an organization, and in order to increase returns on investments, they work to decrease cost (Shaheen & Malik, 2012). Profitability is used by business owners to project the future a business. Profitability is described as the ability of a firm to produce profit for shareholders by using available resources.

The fundamental goal of a business is profit making (Fareed et al., 2016). Profit is an indicator that a firm has a good reputation and that it could continue to survive in the long run. Some firms face the challenge of achieving desired level of profitability because of a strong competition. It has been long that researchers are trying to find out determinants of profitability in different scientific fields (Baeney, 2001). Scholars in finance, accountancy and strategic management believe that internal resources of an organization have significant effect on profitability.

Industry capital adequacy ratio was announced before 2020 by the Central Bank of Nigeria to have increased from 10.8 percent in August, 2019 to 15.3 percent before the beginning of 2020. In November, 2015 the

CBN had disclosed that many deposit banks did not maintain strong capital liquidity level (Saharareporter.com, 2015).

Numerous studies have been conducted on determinants of profitability of deposit money banks. But majority of them had been conducted in foreign countries (see Refni, 2020; Hamid & Ghosh, 2019). Also, the few studies that have investigated determinants of profitability of deposit money banks in Nigeria did not use data up to 2022 financial year. Hence, this study extends its period 2013 to 2022 financial years. The dependent variable of this study is profitability proxy by ROA while the independent variables are capital adequacy ratio and non-performing loans ratio.
The main objective of this study is therefore, to evaluate determinants of profitability of listed Deposit Money Banks (DMBs) while the specific objectives are to:

a) Evaluate effect of capital adequacy on profitability of listed DBMs in Nigeria; and
b) Evaluate effect of non- performing loan on profitability of DMBs in Nigeria.

LITERATURE REVIEW

Capital Adequacy Ratio and Return on Assets

Mufti et al. (2020) examined the effect of financial ratios on profitability of banks in Indonesia Stock Exchange from 2014 to 2017 financial year. Out of forty four firms, thirty eight were chosen and from the official site of the Indonesia Stock Exchange the date of the study were selected. The residual test and multiple linear regressions were data analysis technique. The findings of the study revealed that capital adequacy ratio had a positive and significant effect on profitability.

Jigeer and Koroleva (2023) analyzed the impact of capital adequacy on profitability of city commercial banks in China over a period that ranged from 2008 -2020. 16 city commercial banks were used and the panel data regression was used technique of data analysis. The results showed that capital adequate ratio had a positive significant effect on profitability of city commercial banks.

Awwad (2023) evaluated the effect of capital adequacy ratio on profitability of Palestinian banks and period of the study is from 2010 to 2019. The study used a sample size of 6 local banks that were listed on the Palestinian Stock Exchange. To determine association between capital adequacy and profitability, the study employed simple linear regression. The findings showed that capital adequacy ratio had an inverse relationship with performance.

Non-Performing Loan and Return on Assets

Ayustina et al. (2023) examined the influence of non- performing on profitability of PT. Sulsebar bank from 2017-2021 financial years. The financial statements of PT were the population of the study and the samples that were taken were on monthly basis data for a period of four years and five months. The data was analyzed by using multiple linear regression technique. It was found that non-performing loan had a negative and insignificant impact on return on assets.

Khoirunisa and Karnasi (2023) assessed the effect of non- performing loan on return on assets of conventional banking in Indonesia from 2017 to 2021 financial year employing multiple regressions to examine the relationship between non- performing loan and return on assets while the sample of the study was thirty six conventional banks. The results revealed that non-performing loan had a negative and significant effect on return on assets of conventional banks that were listed on the Indonesian Stock Exchange.

Ozurumba (2016) evaluated the effect of non- performing loan on the performance of selected commercial banks in Nigeria and the period of the study was 2000-2013. The sources of the data were secondary and the techniques of data analysis were ordinary least square method and ratio analysis. The results showed that non- performing loan had a negative association with return on assets.

Theoretical Framework

Structure conduct performance theory is used to under pin this study. This study considers Structure Conduct Performance Theory. Mason (1939) essentially proposes structure conduct performance theory but Bian (1951) thereafter improved on it. The theory asserts that the bank concentration level can be increased if a firm has a great proportion of market shares which will enable it to foster competition amid businesses in the industry.

METHODOLOGY

The correlational research design was adopted in this study and the technique of data analysis is a panel regressions model and the source of data is secondary. 12 Deposit Money Banks in Nigeria that were listed on the Nigerian Stock Exchange fact Book as at 31st December, 2022 are the population of this study. Census approach was adopted in this study as the number of the banks is not too many and their financial statements can be obtained for the period by the study.

Table 1: Variable Measurement

	Acronym	*Measurement*	*Source*
Capital Adequacy Ratio	CAR	Capital/Risk Weighted Asset	(Azmy et al., 2019).
Non-performing Loans	NPL	Total non-performing Loans / Total Loans	(Kusumastuti & Azhar, 2019)
Return on Assets	ROA	Earnings Before Tax / Total Assets	(Azmy et al., 2019)

Source: Developed by the researchers based on literature review

Model specification for the study stated below:

$$roa_{it} = \alpha + \beta_1 car_{it+} \beta_2 npl_{it+} \mu_{it}$$

Where:

α = Intercept

β = Parameter of explanatory variable

μ= Error term

i= Banks involved in the study

t= Time period involved

roa= Return on Assets

car= Capital Adequacy Ratio

npl= Non-performing Loan

β_1- β_2 = Coefficient of independent variables

RESULTS AND DISCUSSIONS

Table 2: Descriptive Statistics of the variables

Variables	*Observations*	*Mean*	*Minimum*	*Maximum*	*Std. Dev.*
Roa	120	0.050	0.016	0.090	0.150
Car	120	0.269	0.138	0.363	0.512
Npl	120	0.048	0.027	0.149	0.015

Source: STATA output, 2023

The result in Table 2 shows that the mean value of return on assets of DMBs is 0.050 while its minimum value is 0.016 and its maximum value is 0.090 with the standard deviation of 0.150. Capital adequate ratio has a standard deviation of 0.512 and the maximum and minimum values are 0.363 and 0.138 respectively. The mean value of capital adequacy ratio is 0.269. Finally, the non-performing loan has an average value of 0.048 with standard deviation of 0.015; while the minimum and maximum values are 0.027 and 0.149 respectively.

Table 3: Correlation Matrix

Variable	*Roa*	*Car*	*Npl*
Roa	1.000		
Car	0.520	1.000	
Npl	-0.023	-0.002	1.000

Source: STATA output, 2023

The Table 3 above shows that the correlation between return on assets of DMBs has a positive of 0.520 with capital adequacy ratio while the association between return on assets and non-performing loan is negative 0.023. Capital adequacy ratio has a negative correlation of 0.002 with non-performing loan.

Table 4: Summary of Regression Result

Result of the model: Impact of credit risk management on the Profitability of DMBs in Nigeria								
Estimator	*OLS*		*FE*		*RE*		*Robust OLS*	
Variable	*Coefficient*	*t-value*	*Coefficient*	*t-value*	*Coefficient*	*t-value*	*Coefficient*	*t-value*
Car	*0.019*	*2.040***	*0.019*	*2.080***	*0.019*	*2.040***	*0.019*	*1.030***
Npl	*-0.006*	*-3.250****	*-0.6*	*-2.930****	*-0.006*	*-3.210****	*-0.006*	*-1.560***
CONST	*0.104*	*126.590****	*0.570*	*115.200****	*0.004*	*124.700****	*0.633*	*77.580****
R^2	*0.422*						*0.424*	
R^2 WTH			*0.353*		*0.345*			
R^2 B/W			*0.289*		*0.338*			
R^2 OV			*0.321*		*0.334*			
F-Stat	*21.02*		*20.410*				*19.240*	
Wald ch2					*78.560*			
Sig	*0.000*		*0.000*		*0.000*		*0.000*	

Source: STATA output, 2023, ***, **, * statistical significance @ 1%, 5% & 10% respectively.

The study uses Robust Ordinary Least Square method because the result of Breusch and Pagan Lagrangian Multiplier is not significant.

Table 4 shows the F-statistics of 19.240 with the p-value of 0.000 which means that the regression model is significant at 1 per cent level of significance and that the model is well specified. The CAR and NPL were important as implied by the model. The R- square was 0.424 and it means that about 42.24 per cent of the predictive power in the regresant that is ROA was jointly explained by the regressors (CAR and NPL). The part of the dependent variable that was not explained can be as a result of other independent variables that were excluded which can explain the regressant but not within the context of the study.

The R-square value also known as the coefficient of determination is 0.424 and it is the same as 42 per cent approximately which means independent variables explained about 42 per cent of variation in profitability of listed DMBs leaving 58 per cent unexplained. The F- statistics of 19.240 with the p-value of 0.000 shows that the regression model in overall is statistically significant at 1 per cent level; and suggests that the regression model can be used to make statistical inference.

CAR has a coefficient of 0.019 with a t- value of 0.030 which is significant at 5 per cent. This implies that CAR can enhance ROA of DMBs in Nigeria. This result is in line with the findings of (Mufti et al. 2020; Jigeer & Koroleva 2023) but is not in line with the result of (Awwad, 2023).

NPL has a coefficient of -0.006 and a t- value of -1.560 which implies it is significant at 5 per cent. This means that NPL plays a crucial part in decreasing profitability of DMBs in Nigeria. This is in line with the positions of Khoirunisa and Karnasi (2023) and Ozurumba (2016).

CONCLUSION AND RECOMMENDATIONS

Determinants of profitability of listed DMBs in Nigeria are examined in this study. The study analyzes effect of CAR and NPL on profitability of listed DMBs. Based on the empirical tests conducted, the study observed that CAR strongly correlates with profitability of DMBs in Nigeria while NPL has a negative significant impact of profitability of DMBs in Nigeria. Thus, the study concluded that CAR and NPL influence profitability of DMBs in Nigeria.

In line with the results and conclusions reached, the study recommends that in order to increase their profitability, DMBs, their regulators and policy makers should make policies geared towards decreasing the level of NPL in DMBs. Management of DMBs in Nigeria should maintain optimum level of CAR in order to remove difficulties associated with meeting financial obligations; and to absorb any financial shocks that may come up, safeguard customers' deposits, hence, improve their profitability.

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