Impact of Competition on the Financial Performance of Listed Deposit Money Banks in Nigeria

Onipe A. Yahaya[1]   Dr. Mrs. Bilkisu K.U. Farouk[2]   Lamidi S. Yahaya[2]   Musa J. Yusuf[3]   Isah S. Dania[4]

1.Department of Accounting, Nigerian Defence Academy, Kaduna, Nigeria
2.Department of Economics, Nigerian Defence Academy, Kaduna, Nigeria
3.Nigerian Institute of Animal Science, Abuja, Nigeria
4.Nigerian Institute of Management (Chartered), Kano, Nigeria

Abstract

The impact of bank competition on bank performance remains a widely debated issue. At present, scholars investigate either the competition-stability or the competition-fragility relationships. The traditional competition-fragility view equates bank competition with instability as competition reduces market power and profit margins which in turn encourages bank managers to take higher risks. In contrast, the competition-stability view stipulates that competition leads to lower loan interest rates and consequently lower moral hazard and adverse selection problems and less risky loan portfolios. This study examines both paradigms using panel data from deposit money banks in Nigeria over a period of ten years (2005-2014). Results show that the overall relationship between competition and financial performance of banks is negative. The study, therefore, concludes that competition has a negative effect on the financial performance of banks in Nigeria. The study suggests that regulators should promote healthy competition among deposit money banks so as to reduce the negative effect of competition on bank financial performance. Managers should take measures to enhance profit margin by reducing expenses. Current efforts of the government in terms of improved power generation may help to cut cost of power borne by the banks. Managers should also ensure healthy loan portfolio by ensuring that only customers with high credit scores get loans.
Keywords: Bank, competition, financial performance, loan, market share, Nigeria, profit margin, risk.

Introduction

In Nigeria, the past thirty years saw a process of liberalization, deregulation and unprecedented financial sector reforms whose main objectives were to increase competition and remove all remaining barriers to the liberalization of Nigeria banking sector. However, the stiff competition that follows these measures has raised concerns about the potential implications on the financial performance of the banks, particularly given the fallout of the 2005 bank consolidation exercise and the 2008 global financial crisis. While the 2005 consolidation exercise was designed to increase the competitiveness of the banks in terms of their capital base and thereby improve their financial performance, the 2008 global financial crisis severely eroded the financial performance of banks in Nigeria. A number of the banks were taken over by the government despite receiving bailout funds worth about ₦400 billion.

The relationship between bank competition and bank performance remains a widely debated issue. At present, scholars investigate either the competition-stability or the competition-fragility relationships. The traditional competition-fragility view equates bank competition with instability as competition reduces market power and profit margins which in turn encourages bank managers to take higher risks. In contrast, the competition-stability view stipulates that competition, for example, low market power in the loan market, leads to lower loan interest rates and consequently lower moral hazard and adverse selection problems and less risky loan portfolios. This study examines both paradigms using panel data from deposit money banks in Nigeria over a period of ten years (2005-2014). It is interesting therefore to study which theory actually holds and the evolvement of this relationship over time across deposit money banks in Nigeria.

The banking sector in Nigeria has not fully recovered from the 2008 turmoil in the global financial system. The crisis impacted severely on the banking sector. This calls for a re-examination of the link between bank performance and changes in the competitive environment. The universal banking system implies the possibility for increase competition and harmonization of bank practices in Nigeria. This study investigates the relationship between competition and financial performance in the Nigerian banking systems between 2005 and 2014. In the banking literature is that there is a trade-off between competition and financial performance. The competition-fragility view considers more bank competition erodes market power, decreases profit margins, and results in reduced franchise value, encouraging banks to take on more risk to increase returns. The other view, competition-stability view, argues that more market power in the loan market may result in higher bank risk because, on the one hand, the higher interest rates charged to loan customers make it harder to repay loans and exacerbate moral hazard incentives of borrowers to shift into riskier projects and, on the other hand, it is possible that a highly concentrated banking market may lead to more risk taking if the banks believe that they are too big to fail in the context of protection by the government safety net. The main contribution of this study is to confirm

if the idea of increasing competition among banks in Nigeria would result in enhance financial performance.

Competition among deposit money banks is reflected in a number of factors, including but not limited to market share, profit margin, risk and relative size of loan portfolio. Market share is defined as a bank total asset as a percentage of industry total asset. Market share is driven by competition in the industry. The aggressive banks tend to have a higher market share and vice versa. The size of a bank market share has an influence on its financial performance. It is not coincidental, therefore, that in Nigeria, First Bank, United Bank for Africa, Guaranty Trust Bank and Zenith Bank are in the forefront in terms of market share. This leads to the study first hypothesis, which states that:

H_1: Market share and financial performance are positively correlated.

Profitability can be defined as the final measure of economic success achieved by a firm in relation to the capital invested in it. This economic success is determined by the magnitude of the net profit accounting (Pimentel, Braga & Casa Nova, 2005). To achieve an appropriate return over the amount of risk accepted by the shareholders, is the main objective of companies operating in capitalist economies. After all, profit is the propulsive element of any investments in different projects. The assessment of profitability is usually done through the ROA and ROE, which is the ultimate measure of economic success. Profitability as a goal of the firm is highly affected by competition. A stiff competition in the industry may results in lower profitability and vice versa. However, competition may also improve profitability as managers find new level of creativity and innovation to meet expectations of stakeholders. This lead to hypothesis two of this study, which states that:

H_2: Profit margin and financial performance are positively correlated.

Bank faces various risks such as interest risk, market risk, credit risk, off balance risk, technology and operational risk, foreign exchange risk, country risk, liquidity risk, and insolvency risk (Tandelilin, Kaaro, Mahadwartha, & Supriyatna, 2007). The bank motivation for risk management comes from those risks which can lead to bank failure or poor performance. Issues of risk management in banking sector have greater impact not only on the bank but also on the economic growth and sustainable development. In the process of doing business, it is inevitable that the firm will be faced with unexpected and very often unpleasant surprises that threaten to undercut or, even worse, to destroy the business. That is the essence of risk and how a firm respond to it will determine whether it will survive and succeed or not. Risk management is a concept that has been used since the beginnings of the human kind, it is an evolving concept. The roots of risk management can be found in corporate insurance industry. The risk has long been studied especially in the last years. It is one of those concepts that do not have a universal definition. Every scholar has a different approach to risk. Gallati (2003) defines risk as a condition in which there exists an exposure to adversity, or a condition in which there exists a possibility of deviation from a desired outcome that is expected or hoped for. Other definitions (Bessis, 2002; Machiraju, 2008 & Schroeck, 2002) include the restriction that risk is based on real world events, including a combination of circumstances in the external environment. But unfortunately this definition does not take into consideration the circumstances in the internal environment of the firm. Risk management of a bank will impact its performance. Risky banks tend to attract only risk taking investors. The relationship of risk and returns has to be managed so that the investors do get the return associated and expected with the risk they are bearing. This leads to the first sets of the study hypotheses:

H_3: Bank risk and financial performance are positively correlated.

Bank exist not only to accept deposits from customers but also to grant loans to deficit sectors. Banks make their money from granting of loans and charging interest. This activity is highly influenced by competition in the industry because it is tied to the ability and capacity of the banks to generate sufficient return on shareholders' investment. Adequate management of loan portfolio is critical for the survival, growth and development of banks. This leads to the study final hypothesis, which states that:

H_4: Loan and financial performance are positively correlated.

The remaining part of this study is dedicated to empirical review, data and methodology, statistical results, conclusions and recommendations.

2. Empirical Review

Scholars have empirically examined the economic role of banking competition. The empirical findings suggest that banking competition has both positive and negative effects, and it is hard to establish which one ultimately dominates. For example, a few studies provide evidence of a clearly negative role of banking competition. Jayaratne and Strahan (1996) estimate the effect of the removal of U.S. bank branching restrictions on state income growth. The removal of such barriers should presumably enhance competition. They find that both personal income and output growth accelerated after states implemented the regulatory change. Hence, their findings suggest, indirectly, a positive effect of bank competition on economic growth. Shaffer (1998) uses data on household income growth between 1979 and 1989 in U.S. metropolitan statistical areas (MSAs). He finds that, after controlling for other determinants of income growth, household income grows faster in MSAs with a higher number of banks. Black and Strahan (2000) focus instead on the impact of banking competition in fostering

entrepreneurial activity. Looking at cross-industry, cross-state U.S. data, they find that the number of new firms and the number of new business incorporations are smaller in states where bank competition is higher.

At the same time, however, some empirical contributions have suggested a positive effect of bank competition. For example, Petersen and Rajan (1995) analyze credit availability for a cross-section of U.S. small businesses located in markets characterized by different degrees of banking competition. They find that firms are less credit constrained if they are in more concentrated markets. In addition, they find that younger firms pay lower loan rates in markets with higher bank concentration. Shaffer (1998) cited earlier, also finds evidence of higher loan charge-off rates in MSAs with a higher number of banks. Scholtens (2000) analyzes competition, growth, and performance in the banking industry. First, he analyzes the relationship between market structure and the performance of the banking industry. Furthermore, he tests hypotheses on whether size matters for individual banks' profit performance. As such, he uses extreme bounds stability analysis to test for the reliability of the regression outcomes. It turns out that bank profits are inversely related to the amount of bank assets and are positively associated with the amount of tier-one bank capital.

Collender and Shaffer (2000) report evidence that while the effect of bank concentration on household income in U.S. metropolitan areas was negative between 1973 and 1984, it was positive during the 1984-96 periods. Bonaccorsi and Dell'Ariccia (2000) analyze cross-industry, cross province Italian data and find that the rate of creation of new firms is higher in provinces with a more concentrated banking sector (an Italian province is roughly equivalent to a U.S. metropolitan statistical area). In fact, the effect is especially strong on new firms belonging to industry sectors that can be considered more informationally opaque, that is, where the technologies adopted are such that banks need to put more effort into screening and selecting entrepreneurs. Fries, Neven and Seabright (2004) examine how competition among banks and their ownership influence the margins and costs of banks in the post-communist transition. To allow the parameters of the margin and cost functions to change over time, they divide the entire sample period in half (1995 to 1998 and 1999 to 2001). In the earlier period, they find that privatized banks earned higher margins than newly established banks or state-owned banks, while newly established foreign banks had significantly lower marginal costs. In the later period, the differences in margins and costs among private banks were no longer significant, but state-owned banks earned significantly lower margins. These findings suggest that initially the privatization of state-owned banks was associated with greater demand for lending and deposit taking services and the entry of new foreign banks with lower costs. However, these effects did not endure and private banks became more similar over time. At the same time, the performance of remaining state-owned bank weakened.

Mugume (2010) focuses on sharpening the debate on the financial sector by analyzing the competitive behavior and the structure–performance correlation. In line with the literature on the measurement of competition, it follows the two mainstreams: nonstructural and the structural approaches in analyzing the nature of competition and market structure of Uganda's financial system. This study measures the degree of competition in Uganda's banking industry and investigates the impact of concentration on competition. It also examines how banks' profitability is linked to the industry's market structure.

Naceur and Omran (2011) examine the influence of bank regulation, concentration, and financial and institutional development on commercial bank margins and profitability across a broad selection of Middle East and North Africa (MENA) countries. The empirical results suggest that bank-specific characteristics, in particular bank capitalization and credit risk, have a positive and significant impact on banks' net interest margin, cost efficiency, and profitability. Also they find that macroeconomic and financial development indicators have no significant impact on net interest margins, except for inflation. Regulatory and institutional variables seem to have an impact on bank performance. Casu and Girardone (2012) investigate the relationship between competition and efficiency in banking markets. Results suggest a negative causation between efficiency and competition, whereas the causality running from competition to efficiency, although positive, is relatively weak. Andries and Capruru (2013) investigate the relationship between competition and financial stability in the EU banking systems between 2003 and 2009 in order to confirm if the idea of increasing competition in EU as a result of a single European market it fits with the issue of financial stability of the European financial system. The two stage empirical estimations demonstrate that in case of EU countries the competition stability view is validated, except the new member countries group. The implications of market power (Lerner Index) had a stronger effect than the structural features (concentration measured with HHI). As secondary results, the study finds that the sizes of the banks and the macroeconomic indicators like GDP growth and inflation rate have different impact on financial stability, depending on groups of countries from EU.

Sohrab Uddin and Suzuki (2014) assess bank performance, competition and their relationship empirically by using banking sector data (1983-2011) and individual bank data (2001-2011) from Bangladesh. Return on assets and data envelopment analysis grounded bank efficiency are used as bank performance measures, whereas eight structural measures are employed for assessing competition followed by the adoption of regression analysis for identifying its impact. The findings report an improvement of bank performance with a few fluctuations in between the sample periods under study. On the other hand, the level of competition has been

consistently increasing in the banking sector, as pointed out by all structural measures. The regression result shows evidence of a negative relationship between competition and bank performance. It is required to revisit the structural changes of the banking sector. In particular, the regulatory authorities need to ensure necessary incentives for banks, particularly for private banks, to improve their performance in terms of profitability and efficiency.

Ajisafe and Akinlo (2014) examine the relationship between competition and efficiency of commercial banks in Nigeria for the period 1990 to 2009. Secondary data were sourced from the annual reports and accounts of fifteen commercial banks in Nigeria. The data were analyzed using pooled least square and dynamic panel generalized method of moment estimation technique with fixed effect. The results of the analysis show that there was a positive and significant relationship between the degree of competition and the level of efficiency of commercial banks in Nigeria. Marques-Ibanez, Altunbas and van Leuvensteijn (2014) find that the increased use of securitization activity in the banking sector prior to the 2007-2009 crisis augmented the effect of competition on realized bank risk (i.e. more intense competition and greater use of securitization is correlated with higher levels of realized risk) during the crisis. In contrast, higher levels of capital did not buffer the impact of competition on realized risk. It follows that cooperation between supervisory and competition authorities is warranted to account for the stability implications of financial innovation and capital regulation.

3. Data and Methodology

The study time horizon is from 2005 to 2014. The fifteen listed deposit money banks in the Nigerian Stock Exchange (NSE) are used. Their annual reports and accounts are the basic source for the data collection. Total sample observation is 150. A panel data study is the most appropriate method to determine the relationship between bank competition and bank financial performance. Competition and financial performance have been the focal point for many studies. The cause of the great number of studies is that financial performance is at the heart of most corporate studies. SPSS 22 is the preferred statistical analysis tool for the study. Proxies for competition are market share, profit margin, risk and loan. Proxies for financial performance are return on asset and return on equity. For analysis of study data, a multiple correlation and regression model is used as Raheman, Zulfiqar and Mustafa (2007), Chowdhury and Chowdhury (2010), Muritala (2012), Park and Jang (2013), Mitan (2014) used for their studies. Two multiple correlation and regression models are estimated and tested are as follows:

$$ROA_{it} = \alpha + \beta_1 MKTSH_{it} + \beta_2 PRFTM_{it} + \beta_3 RISK_{it} + \beta_4 LOAN_{it} + e \ \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \ (1)$$
$$ROE_{it} = \alpha + \beta_1 MKTSH_{it} + \beta_2 PRFTM_{it} + \beta_3 RISK_{it} + \beta_4 LOAN_{it} + e \ \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots \ (2)$$

Whereas:
ROA = return on asset, used to proxy financial performance. It is calculated as profit before tax over total asset.
ROE = return on equity, used to proxy financial performance. It is calculated as profit after tax over equity capital. Both ratios are used to measure financial performance of the firm (Yasser, Entebang & Abu-Mansur, 2011; Pouraghajan, Malekian, Emamgholipour, Lotfollahpour and Bagheri, 2012; Nirajini & Priya, 2013; Mirza & Javed, 2013; Al-Taani, 2013; Visic, 2013; Mitan, 2014 & Yahaya & Andow, 2015).
α, β_1- β_4 = are constant and beta coefficients respectively
MKTSH = market share is used to proxy competition and is calculated by total asset of bank i over industry total asset.
PRFTM = profit margin is used to proxy competition and is calculated as net profit over gross profit.
RISK = standard deviation of return on asset of bank i at year t. The ratio is used by Reddy (2010).
LOAN = total loan portfolio as a percentage of total asset of bank i at year t
e = stochastic error term
i = number of banks (15)
t = time period (10)
Scales of some variables were used to both models to improve the approach of normal distribution and to minimize the heteroskedasticity problems (Lazarides, Drimpetas, & Dimitrios, 2009).

4. Statistical Results

Summary of descriptive statistics results for all the variables as used in the study is presented in table I. The correlation matrix of the variables is presented in table II. The regression models are reported in table III. Table I shows descriptive statistics of sample study, which includes 150 observations, mean values of variables, minimum and maximum values and standard deviation from the mean.

Table I Descriptive Statistics

VARIABLE	N	Minimum	Maximum	Mean	Std. Deviation
ROA	150	.01	.09	.0420	.02833
ROE	150	.04	.52	.2213	.14535
MKTSH	150	.01	.17	.0660	.04911
PRFTM	150	.01	.07	.0300	.02070
RISK	150	.02	.26	.0460	.05998
LOAN	150	.05	.74	.3400	.23170
Valid N (listwise)	150				

Source: IBM SPSS Statistics 22 Output

From table I, the mean value of return on asset is 4.2 per cent. It has a standard deviation of about 2.8 per cent and a minimum mean value of 1 per cent and a maximum mean value of 9 per cent. The return on equity has a mean of 22 per cent and a standard deviation value of 14.5 per cent. It has minimum and maximum mean values of 4 and 52 per cent. The market share has a mean value of 6.6 per cent, with a standard deviation of 5 per cent. It has minimum and maximum values of 1 and 17 per cent respectively. Similarly, the profit margin has a mean value of 3 per cent, with a standard deviation of 2.1 per cent. It has minimum and maximum values of 1 and 7 per cent respectively. Risk has a mean value of 4.6 per cent, with a standard deviation of 6 per cent. It has minimum and maximum values of 2 and 26 per cent respectively. Finally, loan to total asset has a mean value of 34 per cent, with a standard deviation of 23 per cent. It has minimum and maximum mean values of 5 and 74 per cent respectively.

The next level of analysis is correlation analysis. If the Pearson product moment correlation coefficient is equal to or less than 0.20, then it is a weak correlation. If it is greater than 0.20 and equal to or less than 0.40, then it is not a good correlation. Correlation above 0.40 and equal to or less than 0.60 is a moderate correlation and if it is more than 0.60 but equal to or less than 0.80 then it is a good correlation. However, correlation above 0.80 is a very strong correlation and may show sign of multicollinearity. Perfect correlation is at 1.0. Correlation may also be negative, which suggest that the relationship between the dependent and predictor variable is negative. This is the case in table II, where the correlation between three of the proxies of competition and financial performance is negative.

Table II Correlation Matrix

VARIABLE		ROA	ROE	MKTSH	PRFTM	RISK	LOAN
ROA	Pearson Correlation	1					
	Sig. (2-tailed)						
	N	150					
ROE	Pearson Correlation	.775**	1				
	Sig. (2-tailed)	.001					
	N	150	150				
MKTSH	Pearson Correlation	-.451	-.416	1			
	Sig. (2-tailed)	.092	.123				
	N	150	150	150			
PRFTM	Pearson Correlation	.317	.496	.119	1		
	Sig. (2-tailed)	.250	.060	.672			
	N	150	150	150	150		
RISK	Pearson Correlation	-.306	.147	-.159	.506	1	
	Sig. (2-tailed)	.267	.600	.572	.054		
	N	150	150	150	150	150	
LOAN	Pearson Correlation	-.423	-.425	.969**	.116	-.217	1
	Sig. (2-tailed)	.116	.114	.000	.680	.436	
	N	150	150	150	150	150	150

**. Correlation is significant at the 0.01 level (2-tailed).

Source: IBM SPSS Statistics 22 Output

In table II, market share and return on asset and return on equity are negatively correlated (t-values are -0.451 and -0.416) respectively. Hypothesis 1 fails and is hereby rejected. However, profit margin and ROA and ROE are positively correlated (t-values are 0.317 and 0.496) respectively. Hypothesis 2 holds and is hereby accepted. Risk and ROA is negatively correlated (t-value is -0.306), while risk and ROE is positively correlated (t-value is 0.147). Hypothesis 3 holds or fails depending on the measure of financial performance. If and when financial performance is measured by ROA, hypothesis 3 fails and should be rejected. However, if and when financial performance is measured by ROE, hypothesis 3 holds and should be accepted. Finally, loan and ROA and ROE are negatively correlated (t-values are -0.423 and -0.425) respectively. Hypothesis 4 fails and is hereby rejected. Overall results suggest that the relationship between competition and financial performance is negative.

The results of the SPSS Statistics 22 multiple regression analysis are reported in table III when ROA is used as the dependent variable.

Table III Multiple Regression Results: ROA

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.920[a]	.846	.785	.01315

a. Predictors: (Constant), LOAN, PRFTM, RISK, MKTSH

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.010	40	.002	13.748	.000[b]
	Residual	.002	100	.000		
	Total	.011	140			

a. Dependent Variable: ROA

b. Predictors: (Constant), LOAN, PRFTM, RISK, MKTSH

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.056	.008		7.006	.000		
	MKTSH	-.002	.297	-.004	-.008	.994	.058	17.196
	PRFTM	1.166	.206	.852	5.669	.000	.682	1.467
	RISK	-.422	.074	-.893	-5.706	.000	.629	1.591
	LOAN	-.087	.064	-.712	-1.357	.205	.056	17.921

a. Dependent Variable: ROA

Source: IBM SPSS Statistics 22 Output

When return on asset is used as dependent variable and analyzed, the adjusted R^2, which measures the model fitness, is 0.785. This suggests that 78.5 per cent of the variations in return on asset are explained by the predictor variables. Also, three of the four predictor variables have negative beta, which again suggest that overall, the relationship between competition and financial performance is negative. This result is in agreement with the studies by Casu and Girardone (2012) and Sohrab Uddin and Suzuki (2014). The results of the SPSS regression analysis are reported in table IV when ROE is used as the dependent variable.

Table IV Multiple Regression Analysis: ROE

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.755[a]	.570	.398	.11278

a. Predictors: (Constant), LOAN, PRFTM, RISK, MKTSH

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.169	40	.042	3.313	.057[b]
	Residual	.127	100	.013		
	Total	.296	140			

a. Dependent Variable: ROE

b. Predictors: (Constant), LOAN, PRFTM, RISK, MKTSH

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	.233	.069		3.384	.007		
	MKTSH	.504	2.545	.170	.198	.847	.058	17.196
	PRFTM	5.278	1.763	.752	2.993	.014	.682	1.467
	RISK	-.899	.634	-.371	-1.419	.186	.629	1.591
	LOAN	-.476	.551	-.758	-.863	.408	.056	17.921

a. Dependent Variable: ROE

Source: IBM SPSS Statistics 22 Output

When return on equity is used as dependent variable and analyzed, the adjusted R^2, which measures the model fitness, is 0.398. This suggests that 39.8 per cent of the variations in return on equity are explained by the predictor variables. Also, two of the four predictor variables have negative beta, which again suggest a mix result. This result is in agreement with most of the studies on the correlation between competition and financial performance (Petersen & Rajan (1995; Jayaratne & Strahan, 1996; Shaffer, 1998; Fries, Neven & Seabright, 2004; Naceur & Omran, 2011; Casu & Girardone, 2012; Ajisafe & Akinlo, 2014 & Sohrab Uddin & Suzuki, 2014).

A further analysis using the Generalised Least Model (GLM) shows the following test results as reported in table V.

Table V Multivariate Analysis of Covariance Results

Effect		Value	F	Hypothesis df	Error df	Sig.
Intercept	Pillai's Trace	.842	24.017[b]	2.000	9.000	.000
	Wilks' Lambda	.158	24.017[b]	2.000	9.000	.000
	Hotelling's Trace	5.337	24.017[b]	2.000	9.000	.000
	Roy's Largest Root	5.337	24.017[b]	2.000	9.000	.000
MKTSH	Pillai's Trace	.008	.036[b]	2.000	9.000	.965
	Wilks' Lambda	.992	.036[b]	2.000	9.000	.965
	Hotelling's Trace	.008	.036[b]	2.000	9.000	.965
	Roy's Largest Root	.008	.036[b]	2.000	9.000	.965
PRFTM	Pillai's Trace	.772	15.251[b]	2.000	9.000	.001
	Wilks' Lambda	.228	15.251[b]	2.000	9.000	.001
	Hotelling's Trace	3.389	15.251[b]	2.000	9.000	.001
	Roy's Largest Root	3.389	15.251[b]	2.000	9.000	.001
RISK	Pillai's Trace	.819	20.315[b]	2.000	9.000	.000
	Wilks' Lambda	.181	20.315[b]	2.000	9.000	.000
	Hotelling's Trace	4.515	20.315[b]	2.000	9.000	.000
	Roy's Largest Root	4.515	20.315[b]	2.000	9.000	.000
LOAN	Pillai's Trace	.156	.834[b]	2.000	9.000	.465
	Wilks' Lambda	.844	.834[b]	2.000	9.000	.465
	Hotelling's Trace	.185	.834[b]	2.000	9.000	.465
	Roy's Largest Root	.185	.834[b]	2.000	9.000	.465

a. Design: Intercept + MKTSH + PRFTM + RISK + LOAN

b. Exact statistic

From table V, the p-value of market share for the four multivariate tests is 0.965, which shows that market share is not significant. However, the p-value of profit margin for the four multivariate tests is 0.001, which suggests significance. In addition, the p-value of risk for the four multivariate tests is 0.000, which suggests strong significance. Finally, the p-value of loan for the four multivariate tests is 0.465, which suggest not significance. Note that the difference between univariate and multivariate analyses is that a univariate analysis has only one dependent variable (with any number of independent variables/predictors). A multivariate analysis, on the other hand, has many dependent variables (again, with any number of independent variables). The goal of multivariate analysis is to look for an effect of one or more independent variables on several dependent variables at the same time. The results of tests of between subjects-effects are reported in table VI.

Table VI Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	ROA	.010[a]	4	.002	13.748	.000
	ROE	.169[b]	4	.042	3.313	.057
Intercept	ROA	.008	1	.008	49.083	.000
	ROE	.146	1	.146	11.453	.007
MKTSH	ROA	1.064E-8	1	1.064E-8	.000	.994
	ROE	.000	1	.000	.039	.847
PRFTM	ROA	.006	1	.006	32.143	.000
	ROE	.114	1	.114	8.957	.014
RISK	ROA	.006	1	.006	32.557	.000
	ROE	.026	1	.026	2.012	.186
LOAN	ROA	.000	1	.000	1.840	.205
	ROE	.009	1	.009	.746	.408
Error	ROA	.002	10	.000		
	ROE	.127	10	.013		
Total	ROA	.038	15			
	ROE	1.031	15			
Corrected Total	ROA	.011	14			
	ROE	.296	14			

a. R Squared = .846 (Adjusted R Squared = .785)

b. R Squared = .570 (Adjusted R Squared = .398)

Source: IBM SPSS Statistics 22 Output

5. Conclusions and Recommendations

This study examines the correlation between competition and financial performance of deposit money banks in Nigeria. The return on asset model empirical estimations demonstrate that in Nigeria deposit money banks, the competition-fragility view is validated. That means in the period of 2005 – 2014, competition had a negative impact on financial performance. However, the return on equity model estimation suggests a mix result, which implies that both competition-stability view and competition-fragility view are validated. Results show that market share and financial performance under both models are negatively correlated. Similarly, loan and financial performance under both models are negatively correlated. However, profit margin and financial performance under both models are positively correlated. While risk and financial performance are negatively correlated when return on asset is used to measure financial performance, risk and financial performance are positively correlated when return on equity is used to measure financial performance. The study, therefore, concludes that the relationship between competition and financial performance is negative. And as a result, the study suggests that regulators should promote healthy competition among deposit money banks so as to reduce the effect of competition on bank financial performance. Managers should take measures to enhance profit margin by reducing expenses. Current efforts of the government in terms of improved power generation may help to cut cost of power to the banks. Managers should ensure healthy loan portfolio by ensuring that only customers with high credit scores are giving facilities. Further study should be done to explore the additional factors that influence financial performance when return on equity is used as a proxy.

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