



MODERATING ROLE OF LOAN LOSS PROVISION ON THE RELATIONSHIP BETWEEN CAPITAL ADEQUACY RISK AND THE PERFORMANCE OF COMMERCIAL BANKS IN NIGERIA

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Abstract

The review of literatures enable the study to identify in consistency results of risk factors affecting financial performance of banks. This motivated the researcher to introduce a moderating factor. Thus, the basic objective of this study is to examine the moderating role of loan loss provision on the relationship between capital adequacy risk and performance of Commercial Banks in Nigeria for period ranging from 2007 to 2018. The population of the study is fifteen (15) listed commercial banks in the Nigerian Stock Exchange as at 31st December 2018. The research used two data filtering techniques to sample twelve (12) listed commercial banks in the Nigerian Stock Exchange. The independent variable is capital adequacy risk while the moderator is Loan Loss Provision (LLP). The dependent variable is performance measured by profitability using accounting ratio of ROE. Prior to the moderation, the regression outcomes show that the capital adequacy risk and loan loss provision have negative and significant effect on ROE. After the moderation, the regression result indicates that the moderator has positive and significant effect on ROE. In conclusion, loan loss provision significantly moderates the relationship between capital adequacy risk and performance of commercial banks in Nigeria. The research recommends among others that the bank managers should use loan loss provision to manage capital adequacy risk. This is because changes in capital requirement of banks by regulatory bodies like CBN pose a threat to financial performance of commercial banks in Nigeria.

Keywords: Capital adequacy, Commercial bank, Loan loss provision, Performance and ROE

1. Introduction

In Nigeria banking industry, major banks that accept deposits and issue loans to customers in need are commercial banks which sometimes known as Deposit Money Banks-DMBs (CBN, 2015; Nigeria Galleria, 2015). These banks include Microfinance Banks (MFBs), Development Banks, Primary Mortgage Banks, non-interest banks such as Jaiz Bank PLC and Commercial Banks like First Bank of Nigeria PLC, United Bank of Africa PLC, Guaranty Trust Bank PLC, Zenith Bank PLC and so on ReDahila (2020). Commercial banks are established to miximise wealth for its shareholders and in the process, they contribute to economic growth of a nation(Anyanwu, Ananwude, Chijindu& Okoye, 2017). It is also worth to note that commercial



banks in most of the world economies are dominant as a financial institution providing loans and other financial services compared to any other financial institution. Therefore, one of important attributes of commercial banks is to provide liquidity for its customers who may be interested in cash withdrawal and lending money to borrowers. In this process, it is important for commercial banks to evaluate the risk which it faces daily while lending. Risk is the chance of losses resulting from failure of internal processes, people and systems as well as losses from external events (Hemrit & Arab, 2013). Risk irrespective of the type threatens the performance of banks.

Bank performance is gauged by financial and non-financial performance where financial performance is bank profitability measured by Net Interest Margin (NIM), Profit after Taxes (PAT), Return on Assets (ROA), Return on Equity (ROE), Return on Capital Employed (ROCE), Total Asset Value (TAV) and Earning per Share (EPS) (Dahiyat, 2016); Muriithi, Muturi, Waweru, 2016); Mendoza & Rivera, 2017). The performance of the commercial banks in Nigeria are not stable overtime. For example, the profit after taxes of Access Bank were ₦61,677 Million; ₦51,335 Million and ₦73,596 Million which ROE were 0.1911; 0.1428 and 0.1707 for year 2016, 2017 and 2018 respectively (Access Bank, 2018). But the profit after taxes of Zenith Bank were ₦113,885 Million; ₦153,003 Million and ₦165,480 Million which ROE were 0.0314; 0.0351 and 0.0388 for year 2016, 2017 and 2018 respectively (Zenith Bank, 2018). Thus, the profit in the former example is not stable and the profit in the later example is increasing yearly.

Capital adequacy risk is an important variable in determining bank profitability and a well-capitalized bank could provide a signal to the market that a better-than-average performance should be expected (Mendoza & Rivera, 2017). Capital adequacy risk is a risk of banks not meeting minimum capital requirements to ensure safety and soundness as stipulated in the banking supervision and regulatory law (Zhongming, Frimpong & Guoping, 2019). Capital is very essential to banks that is the reason Central Bank of Nigeria (CBN) continuously change the minimum capital requirements when the apex bank realises that capital base of the commercial banks are low. Before the establishment of the CBN in 1958, the minimum capital requirements for banks incorporated in Nigeria were expressed in British pound sterling (£) as Naira (₦) was not Nigeria currency then. This is because the country was under British colonial rule. When CBN was established in 1958 and started banking business in 1959, the minimum capital requirements were 1,500,000 Naira for foreign ownership banks and 600,000 Naira for Nigerian ownership banks (Somoye, 2008; CBN Regulation, 2010). As at 31 December 2019, the minimum capital requirement for commercial banks is 10 billion Naira for banks licensed to operate regionally; 25 billion Naira for banks licensed to operate nationally and 50 billion Naira for bank licensed to operate internationally (Mondaq, 2020).

Loan loss provision is used as a moderator. This is because one of the policies set by the banks is to absorb possible credit losses is loan loss provision. Loan loss provision is provision made against future defaulted loans. In other words, it is money reserved for defaulted loans. Managers use loan loss provision to direct the banks' performance as a mechanism of signaling view to investors, shareholders and users of financial statements. Managers also employ loan loss provision to achieve the certain objectives that would provide the required signals ahead of crisis. As a measure of credit quality, higher loss provisions is better for commercial banks (Karimiyan, Nasserinia & Shafiee, 2013). Apart from loan loss provision influences the



performance of the commercial banks, it also moderates the relationships between capital adequacy risk and financial performance.

There were academic debates about the importance of capital adequacy risk and its influence on the performance of commercial banks. The outcome of the arguments among academic researchers produced mixed findings. Some scholars [such as Purnamawati and MSi (2014) and Zhongming *et al.* (2019)] argued in their studies that capital adequacy risk influence bank performance but other scholars [such as Mendoza and Rivera (2017)] have contrary findings. Purnamawati and MSi (2014) showed that the risk capital ratio and liquidity ratio have a positive and significant effect on profitability of conventional rural bank in Indonesia. However, the study was conducted in Indonesia and the findings may not be applicable to wider perspectives due to place and period of the study. Mendoza and Rivera (2017) indicated that capital adequacy risk has no significant impact on the profitability. On the other hand, credit risk has a negative significant impact on the profitability of rural banks in the Philippines from 2009 to 2013. However, the study was conducted on rural banks in Philippines and the present study is on commercial banks in Nigeria that covers almost both. Zhongming *et al.* (2019) found financial risk factors [such as capital adequacy and liquidity risk] strongly influence the financial performance of 15 commercial banks in Ghana from 2007 to 2017. But the study failed to use change in loan loss provision as a moderating variable. The on-going study use change in loan loss provision as moderator because loan loss provision are funds set aside by the banks to cover bad loans. This research wants to fill the identified gaps by adopting the model of Muriithi, Muturi and Waweru (2016). The scholar made use of explanatory variables like credit risk, market risk, operational risk and liquidity risk as well as control variable (bank size). The ongoing study used change in loan loss provision as moderating variable between capital adequacy risk and the performance of the banks. This research on completion will be beneficial to regulatory bodies, financial managers, investors and academia.

Research Objectives

The basic objective of the study is to examine the moderating role of loan loss provision on the relationship between capital adequacy risk and the performance of Commercial Banks in Nigeria.

- a. To investigate the effect of capital adequacy risk on performance of Commercial Banks in Nigeria.
- b. To determine the moderating effect of loan loss provision on the relationship between capital adequacy risk and performance of Commercial Banks in Nigeria.

Research Hypotheses

In order to achieve the above specific objectives, three (3) null hypotheses are developed for testing as follow:

- Ho₁: Capital adequacy risk has no significant effect on performance of Commercial Banks in Nigeria.
- Ho₂: Loan loss provision has no moderating effect on the relationship between capital adequacy risk and performance of Commercial Banks in Nigeria.

2. Literature Review and Theory

2.1 Capital Adequacy Risk and Financial Performance



Antonina (2011) investigated the determinant of profitability on samples of largest 10 banks (Domestic and foreign ownership) profitability from 2005 to 2009 in Ukraine. The study used panel data estimation with the aid of STATA statistical package. The econometric results reveal that capital adequacy has significant positive effects on bank profitability. Credit risk, has significant negative effects on banks profitability while administrative expenses, liquidity and GDP have insignificant negative effects on the profitability of banks in Ukraine. However, the findings cannot be generalized in wider perspective due to limited scope. Nzioki (2011) studied the impact of capital adequacy on the financial performance of commercial banks quoted at the Nairobi stock exchange from 2004 to 2009. The result regression result shows that capital adequacy contributes positively to the profitability of commercial banks. Therefore, it is paramount for banks to have a sound capital base in order to remain competitive and maintain the confidence of its customers. However, the study used time series data of eight years which is grossly inadequate. The ongoing study uses time series data of 30 years. Ali, Akhtar and Ahmed (2011) studied bank specific and macroeconomic indicators that determine commercial banks profitability in Pakistan from 2006 to 2009. The regression result indicates that capital and credit risk have significant negative effect on banks profitability measured by ROA. But the study failed to include other risk factors such as market risk among its model.

Mathuva (2013) examined capital adequacy, cost income ratio and performance of commercial Banks in Kenya from 1998-2007. The regression result shows that bank risk based capital adequacy has positive relation with bank profitability. On the other hand, cost-income ratio has negative relationship with bank profitability. However, the study reported correlation relationship and not causality relationship among the study variables which is better. Asikhia and Sokefun, (2013) studied capital adequacy and banks profitability in Nigeria from 2006 to 2010. The findings of regression statistic show capital adequacy has positive and significant relationship with profitability of banks. However, the study made use of time series data of 5 years. Ikpefan (2013) studied capital adequacy and the performance of banks in Nigeria from 1986 to 2006. The regression output result indicates that capital adequacy risk has negative impact on profitability of banks measured by ROA. But the time series that ended in year 2006. John and Oke (2013) investigated the impact of capital adequacy on the performance of the Nigerian Banks from 2003 to 2007. The study result showed that capital adequacy has influence on bank performance. The study recommends that the CBN should lay emphasis on banks' capitalization as a determinant of banks performance. However, the study made use of time series data of 5 years.

Ayu, Purnamawati and Si (2014) examined effect of capital and liquidity risk to profitability on conventional rural bank in Indonesia from 1980 to 2013 (33 years). The regression results show that the risk capital ratio and liquidity ratio have a positive and significant effect on profitability (ROA) of conventional rural bank in Indonesia. But, the findings of this study may not be applicable to other nations due to limited scope. Jabbar (2014) examined the determinants of banks profitability among 31 sampled commercial banks operating in Pakistan from 2009 to 2012. The analysis was conducted using panel data estimation technique of common, fixed, random effect model. The results of the study revealed that capital and large size have significant positive effect on banks profitability. Loan loss provision, deposit growth and interest expense have insignificant negative effect on banks profitability in Pakistan. However, the study was carried out in Pakistan and failed to examine other risk factors such as operational risks that may



determine bank profitability. Agbeja, Adelokun and Olufemi (2015) studied capital adequacy ratio and bank profitability in Nigeria from 2010 to 2014. The regression result indicates that capital adequacy has significant positive influence on bank profitability. But the study failed to consider other risk factors that may affect profitability of banks in Nigeria. Lenee and Sulaiman (2016) investigate the capital adequacy measures and bank financial performance in Nigeria from 2008 to 2012. The result shows that capital adequacy strongly and actively stimulates and improves the financial performance of banks in Nigeria. The study recommends that bank managers should improve on the management of bank deposits and assets, introduce adequate short-term investment into the portfolio of banks in order to improve the financial performance of the banks. But the study utilized time series data of 5 years.

Mendoza and Rivera (2017) studied the effect of credit risk and capital adequacy on the profitability of sampled 567 registered rural banks in the Philippines from 2009 to 2013. The regression result shows that capital adequacy has no significant impact on the profitability. On the other and, credit risk has a negative significant impact on the profitability of rural banks in the Philippines. However, the study is on rural banks in Philippines and the present study is on commercial banks in Nigeria. Zhongming, Frimpong and Guoping (2019) examined impact of financial risk indicators on banks' financial performance in Ghana. The result shows that financial risk factors [such as Capital adequacy and liquidity risk] strongly influence the financial performance of 15 commercial banks in Ghana from 2007 to 2017. But the study failed to use change in loan loss provision as a moderating variable.

2.2 Loan Loss Provision and Financial Performance

Loan loss provision is a measure of credit risk used some scholars. Karimiyan *et al.* (2013) studied the relationship between loan loss provision and future earning, return and cash flow in Commercial Banks of Malaysia from 2004 to 2011. There is statistically significant positive relationship between the loan loss provision and future earning and change in return. However, there is positive relationship between loan loss provision and future cash flow in Commercial Banks of Malaysia. Otieno, Nyagol and Onditi (2016) examined the relationship between credit risk management and financial performance of 6 sampled microfinance banks in Kenya from 2011 to 2015. The result of GMM technique of estimated multiple regression shows that loan loss provision coverage ratio has significant positive effect on ROA but significant negative effect on ROE as a measure of banks performance.

Gadzo, Kportorgbi and Gatsi (2019) investigated credit risk and operational risk on financial performance among 24 universal banks in Ghana from 2007 to 2016. The study found that moderating variables (asset quality, bank leverage, cost to income ratio and liquidity) significantly influence credit risk, operational risk as well as the financial performance of the universal banks positively. The study recommends that banks be encouraged to cut-down their lending rates in other to decrease credit risk and subsequently boost profitability. The gap identified in empirical literatures reviewed is that there is scarcity of literature concerning moderating effect of loan loss provision on the relationship between risks factors and the financial performance of commercial banks in Nigeria.



2.3 Agency Theory

This study used agency theory to underpin the response variable which is financial performance of the commercial banks. The financial performance of the commercial banks is measured by profitability which depends on risk factors being managed by the managers who are the employees. This is because the activities of the managers who are agents of the commercial banks have linkage with the profitability.

The agency theory suggested that a firm can be viewed as a nexus of contract between the ownership and control (Jensen & Meckling, 1976; Pervan & Visic, 2012). An agency relationship arises whenever one or more persons called principal (shareholders) hire one or persons called agents (employees). The primary relationship is between the shareholders and the managers but the relationship may be between shareholders and debt-holder(s) in the event of the firm's bankruptcy. The owners (shareholders) perform some services and delegate decision making authority to the agents that may affect the profitability of the commercial banks. The relationship is not harmonious because of agency conflicts or conflicts of interest that may arise between the agent and the principal. Firstly, the principal as well as agent pursue to maximise their own interest. Secondly, the interest of agent (such as prestige, better pay and allowances) may diverge from the interest of the principle which is profit maximization. This is because the agent is not likely to perform in the best interest of the principal (Jensen & Meckling, 1976; Adebayo & Oluwaremi, 2017). Two, information asymmetry as managers look for information while owners rely on managers information, which may not reach in, exalt way. Third, managers works in good faith and they are not aware of risks attached to investment decision by the owners. Lastly, the major shareholders take decision on retained earning which is part or whole the profit of the organization. This is done with intention not to risk future profitability as against payment of dividends to shareholders. Managers may not like it as payment of dividend determines the value of the firms to investors (Panda & Leepsa, 2017).When agency conflicts occur, it tends to increase agency costs. Agency costs are expenses incurred to sustain an affective relationship such as offering performance bonuses to encourage managers to act in the best interest of shareholders. The agency theory assumes the separation of ownership from control. The ownership of the company is the shareholders while the business is managed or controlled by the mangers. Hence, a conflict of interests may emerge between the principal and agent.

One benefit of adopting and applying this agency theory in the commercial banks is to maximize the potentials of the agents in the banks. To maximize the abilities of the agents they are motivated to perform or even go beyond their managerial roles. The ultimate benefit of the motivation is being experienced through the maximization of shareholders wealth that leads to high profitability. The second benefit of adopting the agency theory is that shareholders try to minimize agency costs as it has direct relationship with the financial performance of the commercial banks. Lastly, the application of the agency theory is useful in the concept of utility maximization. This is because the theory is used to maximize skills and potentials of agents that work for the profitability of the banks.

The criticisms of agent theory among others are that the positivist researcher only concentrated on agent side of problem neglecting the principal problem. This led to the discovery of behavioural agency. The behavioural agency theorists argued that standard agency theory only



emphasises on the principal and agent conflict as well as agency cost. But the behavioural agency theory realign both parties’ interest to minimize the agency problem that may affect the organization performance (Panda & Leepsa, 2017). Therefore, the agency theory is applicable to banking business because the financial performance of banks is measured by profitability, which is determined by the decisions and actions of the agents and principal. Agency theory is applied by many scholars in their various research works. Such scholars include Pervan & Visic,(2012); Adebayo and Oluwaremi (2017) and Darayseh and Chazi (2015).

3. Research Methodology

This study adopts ex post factor research design using causality relationship. The causality relationship explains the extent at which independent variables affect dependent variable. The population of this study is fifteen (15) listed commercial in the Nigerian Stock Exchange as at 31st December 2018. However, the study employed two data filtering criteria to arrive at twelve (12) sampled banks. The first one expects the bank to be listed on the Nigerian Stock Exchange and will have a data for the study period ranging from 2007 to 2018. The choice of this duration for the study is because it was the period of mixed regulations that pose serious risks to banking sector in Nigeria. This is because it was within this period that banks faced various risks due to increase in capital requirements which resulted in merger and acquisition of banks. This period is also post banking consolidation period (Somoye, 2008). The year 2007 was chosen as base year of the study because it was the beginning of full banks consolidation period in Nigeria. Also, year 2018 was chosen the end period of the study to ensure that there is availability of published financial statements for the sampled banks. The second filter was to ensure that the commercial banks must be listed on the Nigerian Stock Exchange and the banks must not be delisted throughout the period ranging from 2007 to 2018. Thus, the subject of the sample becomes twelve (12) commercial in Nigeria. This is because their data of the sampled banks are readily available from their published financial reports.

In this study, multiple regression technique was used because the data of the study variables are panel and time series in nature. The dependent variable in this model is ROE while the independent variables are capital adequacy risk and change in loan loss provision. The model was adopted from the study of Muriithi *et al.* (2016) conducted in Kenya. The scholar made use of ROE as the response variable while explanatory variables are credit risk, market risk, operational risk and liquidity risk as well as control variable (bank size). This ongoing study is unique because the moderating variable is used. The moderating variable is the interaction between capital adequacy risk and change in loan loss provision.

The first model shows direct effect of capital adequacy risk and change in loan loss provision on performance of the commercial banks in Nigeria.

$$Performance = \beta_0 + \beta_1 CAR_{it} + \beta_2 LLP_{it} + e_{it} \dots\dots\dots (1)$$

The second model indicates moderating effect of loan loss provision on the relationship between capital adequacy risk and performance of the commercial banks in Nigeria.

$$Performance = \beta_0 + \beta_1 CAR_{it} + \beta_2 LLP_{it} + \beta_3 CAR_{it} \times LLP_{it} + e_{it} \dots\dots\dots (2)$$

Where:



- Performance = Performance is the profitability [Return on Asset] measured by net profit after taxes over total assets.
- CAR = Capital Adequacy Risk is measured by shareholders' equity over total assets.
- CLLP = Change in Loan Loss Provision is provision made against future defaulted loans in the annual financial statement of accounts.
- CARxCLLP = The interaction between CAR and CLLP
- e = Error term
- it = Panel indicator
- β_0 = Constant (interceptor)
- β_1 - β_2 = Beta coefficients of the independent variables.
- B_3 = Beta coefficients of the moderating variables.

From the model, it becomes necessary to estimate for both fixed and random effect. In addition, the following diagnostics test were conducted.

Method of Data Analysis and Hypotheses of Testing

Data of the study variables were entered and computed using Statistical Package for Social Sciences, version 23. The output of the data which is the multiple regression results are analyzed and hypotheses tested. Decision rule is that the researcher rejects the null hypotheses earlier stated in chapter one if the results of this study are significant at 1% (0.000 – 0.005); 5% (0.006 – 0.050) and 10% (0.051 – 0.099). Otherwise, the researcher fails to reject the null hypotheses because no sufficient reasons for rejection.

4. Results and Discussions

4.1. Normality Test

Normality tests were conducted to test whether the data of the study variables are normally distributed. Thus, the normality of the data of th study variables were conducted using descriptive statistic test, correction test, multicollinearity test and ANOVA test(Pallant, 2001; Hair, Black, Babin & Anderson , 2014). The swedness of the ROE and CLL are between ± 1.9 which is normal. The correlation coefficient between CAR and CLL is less than 0.9 which is normal, Again, multicollinearity test shows Tolerance level (greater than 0.10) and VIF (less than 10.0) which are normal. Lastly, the ANOVA statistic is 0.000 which is significant at 5% (see Appendix).

4.2. Regression Results

Table 4.1 presents summary information concerning the moderating effects of loan loss provision on the relationship between independent variable and dependent variable of this study.

Table 4.1. Summary of Estimated Regression Results (Moderating Effect)

Model 2	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	0.244	0.038		6.432	0.000	0.169	0.318
CAP	-0.012	0.004	-0.430	-2.909	0.004	-0.019	-0.004



CLLP	-0.043	0.027	-0.137	-1.597	0.113	-0.097	0.010
Moderating Variable							
CAPCLLP	0.006	0.003	0.337	2.039	0.043	0.000	0.013
R	0.715						
R-Square	0.512.						
Adjusted R-Square	0.501						
Standard error of the estimates	0.3079597						
F-Statistic	48.896						
Sig. F-Statistic	0.000						

Dependent variable: ROE

Significance Level: 1% (**), 5% (*)

Source: SPSS-Version 23, Regression Output, 2020.

This study moderates the relationship between Capital Adequacy Risk (CAR) and Return on Equity (ROE) using Change in Loan Loss Provision (CLLP). This is because the moderating variable presented in the model 2 is the interaction between capital adequacy risk and loan loss provision. The first part of Table 4.1 shows outcome of regression results between the predictors and ROE with constant β value of 0.244 and standard error of 0.038. Capital adequacy risk has negative coefficient β value of -0.012, standard error of 0.004, t - value of -2.909 and significance level of 0.004 (5%). Hence, Capital adequacy risk has significant negative effect on ROE and hypothesis one (H_{01}) is rejected. This means that the decline in capital adequacy risk will significantly decline the performance of the commercial banks. This result is similar with the finding of Ali *et al.* (2011); Antonina (2011) and Ikpefan (2013) that showed capital adequacy risk has significant negative impact on profitability. But the result is different from the findings of Nzioki (2011); Mathuva (2013); Jabbar (2014); Purnamawati and MSi (2014) and Agbeja *et al.* (2015) that indicated capital adequacy risk has significant positive influence on bank profitability.

However, the moderator [capital adequacy risk and loan loss provision] has positive coefficient β value of 0.006, standard error of 0.003, t - value of 2.039 and significance value of 0.043 (10%). Therefore, the moderator has positive and significant effect on ROE and hypothesis three (H_{02}) is rejected. This implies that there is sufficient evidence to suggest that loan loss provision moderates the relationship between capital adequacy risk and performance since the relationship is significant. The result is different from the findings of Gadzo *et al.* (2019) that showed moderating variables (such as asset quality, bank leverage, cost to income ratio and liquidity) significantly influence the financial performance of the universal banks positively.

The second part of Table 4.1 is the diagnose test of the model 2, the values of R, R^2 and adjusted R^2 are 0.715, 0.512 and 0.501 respectively. The value of R is the coefficient of correlation that explains the relationship between the independent variable, moderating variable and dependent variable which is a strong positive relationship. In addition, the R^2 value is coefficient of determination that indicates that 51.2 percent of the variation in the dependent variable (ROE) is explained by the independent and moderating variables of the model. The value of R^2 is strong because a value of R^2 below 0.2 is considered weak; a value of R^2 between 0.2 and 0.4 is moderate; and a value R^2 above 0.4 is strong (SSRL, 2010). On the other hand, the adjusted R^2



statistic corrects the R^2 value to provide a better estimate (Pallant, 2001 and Hair *et al.*, 2014). The standard error of the estimates shows the standard deviation of the residuals to be 0.3079597.

The F statistic value (P- value) is 48.896 with significance level of 0.000. If the significance of F statistic value is less than 0.005 ($p < 0.005$) it means independent and moderating variables contribute to the prediction of the dependent variable (Pallant, 2001 and Hair *et al.*, 2014). Also, p – value in the ANOVA is significance at 0.000. This indicates absence of committing type I error at 95% confidence interval.

5. Conclusions and Recommendations

There were contradiction in literature concerning the results of risk factors and financial performance. This brought about the introduction of the moderator which is the interaction between capital adequacy risk and change in loan loss provision. Thus, this study examined the moderating effect of loan loss provision on the relationship between risks factors and financial performance of commercial banks in Nigeria for period ranging from 2007 to 2018. Prior to the moderation, the regression outcome shows that capital adequacy risk has negative and significant effect on the financial performance measured by ROE. After the moderation, the regression result indicates that the moderator has positive and significant effect on ROE. In conclusion, loan loss provision significantly moderates the relationship between capital adequacy risk and performance of commercial banks in Nigeria. Based on the findings, the study recommends that bank managers should use loan loss provision to manage capital adequacy risk. This is because changes in capital requirement of banks by regulatory bodies like CBN pose a threat to financial performance of commercial banks in Nigeria.

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APPENDIX

Descriptive Statistics

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ROE	144	5.9659	-3.8662	2.0997	.132680	.4360435	-4.174	.202	54.669	.401
CAP	144	1.9807E2	-5.8629	192.2096	8.462859E0	16.2376757	10.398	.202	116.854	.401
CLLP	144	11.6659	-6.6673	4.9986	.029501	1.3840641	-2.374	.202	11.719	.401
Valid N (listwise)	144									

Correlations

		ROE	CAP	CLLP
ROE	Pearson Correlation	1	-.705**	.056
	Sig. (2-tailed)		.000	.507
	N	144	144	144
CAP	Pearson Correlation	-.705**	1	-.093
	Sig. (2-tailed)	.000		.265
	N	144	144	144



CLLP	Pearson Correlation	.056	-.093	1
	Sig. (2-tailed)	.507	.265	
	N	144	144	144

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

Results of Model 1

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.705 ^a	.497	.490	.3113904	.497	69.702	2	141	.000	2.113

a. Predictors: (Constant), CLLP, CAP

b. Dependent Variable: ROE

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.517	2	6.759	69.702	.000 ^a
	Residual	13.672	141	.097		
	Total	27.189	143			

a. Predictors: (Constant), CLLP, CAP

b. Dependent Variable: ROE

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
		1	(Constant)	.293			.029		9.993	.000
	CAP	-.019	.002	-.706	-11.770	.000	-.022	-.016	.991	1.009
	CLLP	-.003	.019	-.010	-.171	.865	-.041	.034	.991	1.009

a. Dependent Variable: ROE

Results of Model 2

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.715 ^a	.512	.501	.3079597	.512	48.896	3	140	.000	2.069

a. Predictors: (Constant), CAPCLLP, CLLP, CAP

b. Dependent Variable: ROE

ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.912	3	4.637	48.896	.000 ^a
	Residual	13.277	140	.095		
	Total	27.189	143			

a. Predictors: (Constant), CAPCLLP, CLLP, CAP



ANOVA^b

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	13.912	3	4.637	48.896	.000 ^a
	Residual	13.277	140	.095		
	Total	27.189	143			

b. Dependent Variable: ROE

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	.244	.038		6.432	.000	.169	.318
	CAP	-.012	.004	-.430	-2.909	.004	-.019	-.004
	CLLP	-.043	.027	-.137	-1.597	.113	-.097	.010
	CAPCLLP	.006	.003	.337	2.039	.043	.000	.013

a. Dependent Variable: ROE