ANALYSIS OF THE IMPACTS OF CREDIT ADMINISTRATION ON PROFITABILITY IN NIGERIA: BANKING SECTOR PERSPECTIVE

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Abstract

The study empirically analysed the effect of impacts of credit administration on profitability in Nigerian banking sector. Secondary data were used in this study. The data was obtained from annual reports accounts of ten (10) quoted Nigerian commercial Banks. The variables for which data were sourced include return on capital employed (ROCE), deposits, loans, and money transfer from 2004 to 2013. Panel data analysis was employed in this study. Finding reveals that there is a positive significant effect of loan and deposit on ROCE ((β = .1572368; t=13.41, β = .1544665; t=2.88). Credit administration has strong and statistical significant positive impact on profitability of banking sector in Nigeria. In order to improve bank profitability there should be efficient management of credit administration. Banks should also focus on other revenue rivulet that will enhance the profitability of the bank apart from over reliance on interest income

Key words; Credit administration; Loan; Deposit; Panel data analysis; Nigerian Banks

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INTRODUCTION

Background to the study

Banking industry has been known for its intermediation role in providing financial assistance (credit) needed in the economy. This role is normally carried out in many ways via granting of loans and advances to customers, which are the major part of bank lending. Apart from loans and advances, there are other forms of banking or bank credits or bonds issued by banks for and on behalf of customers. Banks are merely custodians of the money which they give out to their customers as a loan on which the interest must be paid to depositors and dividends to the investors. Loans and advances are the total amount of money a bank lends out to its customers at any given period of time. Bank loan is an amount of money loaned at interest by a bank to a borrower, usually on collateral security, for a certain period of time. It can be in form of overdraft which is on a short term basis or mortgage loan which is on a long term basis Nwankwo (1980) brought out that bank usually charges the borrower interest for using its money. These loans and advances usually have maturity period. Credits must be made to people who are capable of utilizing it well and repaying the loan at its maturity. The place of loans and advances in the affairs of banks can be explained by referring to the fact that "loans and advances are the largest single item in the assets structures of Nigeria commercial Banks. It also constitutes the main source of the operating income of banks and also the most profitable assets for the employment of banks funds.

According to Osayameh (1996), the major objective of commercial banks' lending is to maximize profit. The staggering increase in volume of banks credit in Nigeria in 2005 alone lends credence to this assertion. In 2005, aggregate banks credit to the domestic economy grew by 30.8% to a staggering increase of N2,007.4 billion compared with the rate of 22.5 per cent, while credit to the core private sector increased by 29.4 per cent to N1,950 billion(CBN). However, commercial banks decisions to lend out loans are influenced by a lot of factors such as the prevailing interest rate, the volume of deposits, the level of their domestic and foreign investment, banks liquidity ratio, prestige and public recognition to mention a few. Therefore, no matter the sources of the generation of income or the economic policies of the country, commercial banks would be interested in giving out loans and advances to their numerous customers.

Due to the increasing spate of non-performing loans, the Basel II Accord emphasized on credit risk management practices. Compliance with the Accord means a sound approach to tackling credit risk has been taken and this ultimately improves bank performance. Through the effective management of credit risk exposure, banks not only support the viability and profitability of their own business, they also contribute to systemic stability and to an efficient allocation of capital in the economy (Psillaki, Tsolas, and Margaritis, 2010). Lending which may be on short, medium or long-term basis is one of the services that deposit money banks do render to their customers. In other words, banks do grant loans and advances to individuals, business organizations as well as government in order to enable them embark on investment and development activities as a mean of aiding their growth in particular or contributing toward the economic development of a country in general (Olokoyo 2011). The CBN also require that their total value of a loan credit facility or any other liability in respect of a borrower, at any time, should not exceed 20% of the shareholders' funds unimpaired by losses in the case of commercial banks (Olokoyo 2011). Since 2006 mergers and acquisitions of banks in Nigeria, no existing literature has ever examined whether credit administration has positive or negative impact on bank profitability of merged banks in Nigeria using transferred money as a variable. A substantial portion of these studies focused on the impact of mergers on bank loan and deposit rates. In the light of this gap, this study examines the effect of credits administration on profitability of Nigeria banks, and also determines the effect of transferred money on profitability of banks in Nigeria.

Objectives of the Study

The main objective of this study is to examine the effect of credit administration on profitability of commercial Banks in Nigeria. The specific objectives examined are:

- To evaluate the effect of loan on bank's profitability in Nigeria commercial banks
- To examine the impact of customer deposit on bank's profitability in Nigeria commercial bank

Literature review

Banking performance

Commercial Banks are entrusted with the funds of depositors. These funds are generally used by banks for their business. The fund belongs to the customers so a programme must exist for

management of these funds. The programme must constantly address three basic objectives: liquidity, safety and income. Successful management calls for proper balancing of all these three. Liquidity enables the banks to meet loan demands of their valuable and long established customers who enjoy good credit standing. The second objective being safety is to avoid undue risk since banks meet responsibility of protecting the deposit entrusted to them. Proper and prudent management of banks create and hence customer confidence. The third being income/profitability which is aimed at growth and expansion to meet repayment of interest charges on debt, to achieve the objective of maximizing wealth of shareholders and to survive competition in the banking industry (Okwoli, 1996; Uwuigbe, 2011). Certainly, many banks have their own unique objectives. Some wish to grow faster and achieve some long-range growth objective, others seem to prefer quiet life, minimizing risk and conveying the image of a sound bank, but with modest rewards to their shareholders. Ordinarily, stock prices and its behavior are deemed to reflect the performance of a firm. This is a market indicator and may not be reliable always. However, the size of the bank, the volume of deposit and its profitability could be deemed as more reliable performance indicators.

In a market based economy, the banking regulation holds a very significant responsibility and is considered as one of the most important components of a country's economy. Banking provides services which have a vital role in the economic system of the country. The capital of the banks is the main resource of purchasing productions and services; while their granted loans are also regarded as a credit for all the economic entities like families, occupations, corporations and government. Therefore, the optimal performance of the banks and effective application of facilities are so useful in capital utilization and considerably in different economic activities (Abdullah et al, 2009). Banks are relevant to economic development through the financial assistance they provide. The role of the bank as the intermediary between the deficit units and the surplus units can be said to be a catalyst for economic growth. The efficient and effective performance of the banking industry over time is an index of financial stability in any nation. The extent to which a bank extends credit to the public for productive activities accelerates the pace of a nation's economic growth and its long-term sustainability.

Bank loan is an amount of money loaned at interest by a bank to a borrower, usually on collateral security, for a certain period of time. It can be in form of overdraft which is on a short term basis or mortgage loan which is on a long term basis. Banks generally provide avenue for savings to those who have surplus funds and the bulk of such funds are lent out to needy customers in form of loans and overdrafts. Banks do grant loans and advances to individuals, business organizations as well as government in order to enable them embark on investment and development activities as a mean of aiding their growth in particular or contributing toward the economic development of a country in general (Olokoyo 2011).

Furthermore, since banks also have an obligation to satisfy the legitimate credit requirements of their depositors and the community and to meet the aspiration of profit making of the shareholders. These objective needs must also consider loans demand. Every commercial bank is under simultaneous pressure from depositors and shareholders. Customers deposit funds with those banks that meet their request for credit; Shareholders look for growth and profit of the banks which cannot be achieved without ranting credits. It therefore requires a higher degree of management skill to reconcile the two. Bad credit management has lead to so many problems; most prominent is bad debt with a devastating effect on the banks and the entire economy.

Empirical review

Kolapo, Ayeni, And Oke (2012) empirically investigated effect of credit risk on the performance of commercial banks in Nigeria over the period of 11 years (2000-2010). Five commercial banking firms were selected on a cross sectional basis for eleven years. The traditional profit theory was employed to formulate profit, measured by Return on Asset (ROA), as a function of the ratio of Non-performing loan to loan & Advances (NPL/LA), ratio of Total loan & Advances to Total deposit (LA/TD) and the ratio of loan loss provision to classified loans (LLP/CL) as measures of credit risk. Panel model analysis was used to estimate the determinants of the profit function. The results showed that the effect of credit risk on bank performance measured by the Return on Assets of banks is cross-sectional invariant. That is the effect is similar across banks in Nigeria, though the degree to which individual banks are affected is not captured by the method of analysis employed in the study. A 100 percent increase in non-performing loan reduces profitability (ROA) by about 6.2 percent, a 100 percent increase in loan

loss provision also reduces profitability by about 0.65percent while a 100 percent increase in total loan and advances increase profitability by about 9.6 percent.

Olokoyo (2011) used regression analysis to investigate the determinants of commercial banks lending behaviour in Nigeria. The study discovered that commercial banks deposits have the greatest impacts on their lending behaviour. Epure and Lafuente (2012) examined bank performance in the presence of risk for Costa-Rican banking industry during 1998-2007. The results showed that performance improvements follow regulatory changes and that risk explains differences in banks and non-performing loans negatively affect efficiency and return on assets while the capital adequacy ratio has a positive impact on the net interest margin.

Victor and Eze (2013) examined the impact of bank lending rate on the performance of Nigerian Deposit Money Banks between 2000 and 2010. It specifically determined the effects of lending rate and monetary policy rate on the performance of Nigerian Deposit Money Banks and analyzed how bank lending rate policy affects the performance of Nigerian deposit money banks. The study utilized secondary data econometrics in a regression, where time-series and quantitative design were combined and estimated. The result confirmed that the lending rate and monetary policy rate has significant and positive effects on the performance of Nigerian deposit money banks.

Felix and Claudine (2008) investigated the relationship between bank performance and credit risk management. It could be inferred from their findings that return on equity (ROE) and return on assets (ROA) both measuring profitability were inversely related to the ratio of non-performing loan to total loan of financial institutions thereby leading to a decline in profitability.

Kargi (2011) evaluated the impact of credit risk on the profitability of Nigerian banks. Financial ratios as measures of bank performance and credit risk were collected from the annual reports and accounts of sampled banks from 2004-2008 and analyzed using descriptive, correlation and regression techniques. The findings revealed that credit risk management has a significant impact on the profitability of Nigerian banks. It concluded that banks' profitability is inversely

influenced by the levels of loans and advances, non-performing loans and deposits thereby exposing them to great risk of illiquidity and distress.

Epure and Lafuente (2012) examined bank performance in the presence of risk for Costa-Rican banking industry during 1998-2007. The results showed that performance improvements follow regulatory changes and that risk explains differences in banks and non-performing loans negatively affect efficiency and return on assets while the capital adequacy ratio has a positive impact on the net interest margin.

Ahmad and Ariff (2007) examined the key determinants of credit risk of commercial banks on emerging economy banking systems compared with the developed economies. The study found that regulation is important for banking systems that offer multi-products and services; management quality is critical in the cases of loan-dominant banks in emerging economies.

Felix and Claudine (2008) examined the association between the performance of banks and credit risk management. As part of their findings, they observed that return on equity and return on assets both measuring profitability were inversely related to the ratio of non-performing loan to total loan of financial institutions thereby leading to a decline in profitability. Also, Hosna, et al. (2009) in their study opined that credit risk has a significant positive effect on the profitability of commercial banks in Sweden.

Lawrence (2013) focuses on the effect of loan management on performance of Nigerian banks. Relevant data were collected from financial report. The data was obtained from a survey of some selected banks in Nigeria. The data collected were analyzed by the use of regression. Some performance indicators such as profit after tax, earnings per share and dividend were used to measure the performance of the selected banks. The analyses reveal that loan is a predominate source of revenue, and effective management of loan portfolio and credit function is fundamental to banks safety and soundness. Although these activities continue to be mainstays of loan portfolio management, analysis of past credit problems, such as those associated with the banking sector, has made it clear that portfolio managers should do more. There is also the failure of bank management to establish sound lending policies and adequate credit administration procedure. Banks, as custodians of depositors' fund therefore, are obliged to

exercise due care and prudence on their lending operations. While the test reveals that there is no significant relationship between effective loan management and the performance of banks. The work concludes that loan management has not affected the performance of Nigerian banks.

Iwedi and Onuegbu (2014) carried out an empirical investigation into the effect of credit risk and performance of banks in Nigeria over the period of 15 year (1997-2011). Five banking firms were selected from the twenty existing deposit money banks in Nigeria using judgmental sampling techniques. Data were sourced from the annual reports and accounts statements/sheets of the banks in the sample. The data comprises of time- series and cross sectional data which were pooled into a panel data set and estimated using panel data regression techniques. The result shows that there is a positive relationship between Ratio of non- performing loans to loan and advances (LogNPL) and banks performance (LogROA). This indicates that banks in the study carry a very minimal level of non-performing loans in their loan portfolio and as such this does not conform to our apriori expectations. While also there exist a positive relationship between Ratio of loan and advances to total deposit (LogLA) and banks performance (LogROA), and this is significant at 1%. An increase in loan and advances increases banks performance through interest income generated from loan and advance.

Kithinji (2010) assessed the effect of credit risk management on the profitability of commercial banks in Kenya. Data on the amount of credit, level of non-performing loans and profits were collected for the period 2004 to2008. The findings revealed that the bulk of the profits of commercial banks are not influenced by the amount of credit and non-performing loans, therefore suggesting that other variables other than credit and non-performing loans impact on profits.

Chen and Pan (2012) examined the credit risk efficiency of 34Taiwanese commercial banks over the period 2005-2008. Their study used financial ratio to assess the credit risk and was analysed using Data Envelopment analysis (DEA). The credit risk parameters were credit risk technical efficiency (CR-TE), credit risk allocative efficiency (CR-AE) and risk cost efficiency (CR-CE). The result indicated that only one bank is efficient in all types of efficiencies over the evaluated

periods. Overall, the DEA results show relatively low average efficiency levels in CR-TE, CR-CE and CR-CE in 2008.

Uwalomwa et al (2015) critically assessed the effects of credit management on banks's performance in Nigeria. In achieving the objectives identified in this study, the audited corporate annual financial statement of listed banks covering the period 2007-2011 were analyzed. More so, a sum total of ten (10) listed banks were selected and analyzed for the study using the purposive sampling method. However, in an assessing the research postulations, the study adopted the use of both descriptive statistics and econometric analysis using the panel linear regression methodology consisting of periodic and cross sectional data in the estimation of the regression equation. Findings from the study revealed that while ratio of non-performing loans and bad debt do have a significant negative effect on the performance of banks in Nigeria, on the other hand, the relationship between secured and unsecured loan ratio and bank's performance was not significant.

METHODOLOGY

Source of data

Method of Data Collection

The data was obtained from annual reports accounts of ten (10) quoted Nigerian commercial Banks. The variables for which data were sourced include return on capital employed (ROCE), deposits, loans, and money transfer from 2004 to 2013.

Data analysis technique

The panel data analysis were used is this study. It has certain benefits like using the assumption that the banks are heterogeneous, more variability, less co-linearity between variables, more informative data, more degree of freedom and more efficient.

MODEL SPECIFICATION

The impact of credit administration on profitability of commercial Banks in Nigeria is investigated using the panel data of selected banks listed in Nigeria Stock Exchange (NSE).

$$ROCE = f(LOAN, \; DEPOSIT, \; MONTRAF, \; \mu) \qquad 1$$

$$ROCE = \alpha 0 + \beta 1 LOAN + \beta 2\ DEPOSIT + \beta 3\ MONTRAF,\ \mu) \qquad 2$$

Where, Dependent Variable=Returns on capital employed (ROCE)

Independent Variable= Loans and advances (LOAN), customers' deposit (DEPOSIT), and money transfer (MONTRAF)

DATA PRESENTATION AND ANALYSIS

The impact of credit administration on profitability of commercial Banks in Nigeria is estimated using panel data analysis. Pooled effect, Fixed Effect and Random Effect Model are used to validate the results. Table 2 exhibited the results of pooled effect model, Table 3 exhibited the results of Fixed Effect Model and Table 4 exhibited the results of Random Effect Model.

Table-1. Descriptive Analysis of the determinant of profitability of Selected Nigerian Commercial Banks in Nigeria

	Observation	Mean	Standard deviation	Minimum	Maximum
ROCE	100	4.18e+07	4.52e+07	24429	2.09e+08
LOAN	100	2.00e+08	2.40e+08	4248697	1.13e+09
DEPOSIT	100	3.72e+08	3.95e+08	6475336	1.78e+09
MONTRAF	100	2.05e+07	2.64e+07	373000	1.27e+08

The descriptive statistics of the analysis is presented in Table 1 above shows that profitability (ROCE) as the dependent variable. ROCE had a mean value of 4.18 with a standard deviation of 4.52, it had a maximum value of 2.09e+08 and a minimum value of 24429. LOAN had a mean of 2.00e+08 and standard deviation of 2.40e+08 with positive maximum and minimum value of 1.13e+09 and 4248697 respectively, which signifies that for every 1% increase in loan and advances offered to their customer, Profit increases by up to 2.00%, this implies that there is a positive relationship between Profitability and Loan and advances of Nigerian banks.

The effect of deposits and money transfer can be seen as shown in the Table 1, with mean values of 3.72e+08 and 2.05e+07 respectively and standard deviations of 3.95e+08 and 2.64e+07

having positive maximum values of 1.78e+09 and 1.27e+08 and positive minimum values of 6475336 and 1.27e+08. This implies that 1% increase in customers' deposits and money transfer generates a rise in profitability of 3.72e+08 and 2.05e+07 respectively. It can be deduced from the analysis that there is a positive relationship between bank's profits and credit administration, therefore null hypothesis is rejected.

Table 2- Pooled effect Model

Dependent variables	Independent variables	Coefficient	Standard error	T	P>/T/	(95% conf. Interval)
ROCE	LOANS	.1681016	.010829	15.88	0.000	.1470947 .1891085
	DEPOSIT	.1380672	.0632493	2.18	0.031	.0125184 .263616
	MONTRAF	.0079902	.0210913	0.38	0.706	-.0338758 .0498561
	CONSTANT	4736649	2168990	2.18	0.031	431236.8 9042061
R squared =0.8868	Adj R squared = 0.8832	Prob> F = 0.0000	Root MSE = 1.5e+07		F(3, 96)=250.63	

Source : Regression using STATA 11

Table 2 above shows the effect of loans, deposits, and money transfer on ROCE. 1% increase in loan will increase ROCE by 16%, it shows that there is a positive relationship between ROCE and loan at a significant level of 5%. 1% increase in deposit increases ROCE by 13%, it shows that there is a positive relationship between ROCE and deposits at a significant level of 5%. 1% increase in money transfer increases ROCE by 0.8%, it shows that there is a positive relationship between ROCE and money transfer at a significant level of 70%.

Given the coefficient of determination (R^2) as 0.8868 which is 89% supported by high value of adjusted R^2as 88%, it presumes that the independent variables incorporated into this model have been able to explain the variation of profitability to 94%. That is, there is a significant relationship between dependent variable (ROCE) and the independent variables (loans, deposits and money transfer). The F Probability statistic also confirms the significance of this model.

Table 3- Random effect Model

Dependent variables	Independent variables	coefficient	Standard error	T	P>/T/	(95% conf. Interval)
	LOANS	.1628625	.0108412	15.02	0.000	.1416141 .1841109
	DEPOSIT	.1437575	.0696472	2.06	0.039	.0072514 .2802635
	MONTRAF	.0137395	.0206607	0.67	0.506	-.0267547 .0542338
ROCE	CONSTANT	5261424	2723036	1.93	0.053	-.75628.91 1.06e+07
R-squared within = 0.8742 between = 0.9354 overall = 0.8867			Prob> chi2		Wald chi2 (3)	

Source : Regression using STATA 11

Random effect needs to be tested because of the doubt that may arise with pooled result. Table 2 shows that 1% increase in loan will increase ROCE by 16%, it shows that there is a positive relationship between ROCE and loan at a significant level of 0%. 1% increase in money transfer will increase ROCE by 14%, it shows that there is a positive relationship between ROCE and money transfer at a significant level of 3%. 1% increase in mobile banking will increase ROCE by 1%, it shows that there is a positive relationship between ROCE and mobile banking at a significant level of 50%.

Table 4 -Fixed effect Model

Dependent variables	Independent variables	coefficient	Standard error	T	P>/T/	(95% conf. Interval)
	LOANS	.1572368	.0117248	13.41	0.000	.1339325 .1805411
ROCE	DEPOSIT	.1544665	.0819697	2.88	0.043	-. 0084572 .3173902
	MONTRAF	.0196083	.0213233	0.92	0.360	-.0227741 .0619906
	CONSTANT	5752443	2284785	2.52	0.014	1211186 1.03e+07

R- squared Within = 0.8743 Between = 0.9333 Overall = 0.8862	Prob> F = 0.0000	F(3, 87) = 201.73

Source : Regression using STATA 11

The result shows that 1% increase in loan will increase ROCE by 16%, it shows that there is a positive relationship between ROCE and loan at a significant level of 5%. 1% increase in money transfer will increase ROCE by 15%, it shows that there is a positive relationship between ROCE and money transfer at a significant level of 5%. 1% increase in mobile banking will increase ROCE by 2%, it shows that there is a positive relationship between ROCE and mobile banking but it is not significant. t-values test the hypothesis that each coefficient is different from 0. To reject this, the t-value has to be higher than 1.96. Therefore, loans and deposit have a significant influence on ROCE. The higher the t-value, the higher is the relevance of the variables.

Table 4- Hausman test

Dependent variables	Independent variables	Coefficient (b)	Coefficient (B)	(b-B) Difference	Sqrt (diag (v.b-v.B)) S.E
ROCE	LOANS	.1628625	.1572368	.0056257	.
	DEPOSIT	.1437575	.1544665	-.010709	-
	MONTRAF	.0137395	.0196083	-.0058688	.
b = consistent under Ho and Ha;	B = inconsistent under Ha, efficient under Ho	Test: Ho: difference in coefficients not systematic Chi2 (3) = (b-B)’ [(v.b-v.B)^ (-1)] (b-B) = -1.96 Chi2< 0			

Source : Regression using STATA 11

To decide between fixed or random effects, Hausman test was conducted where the null hypothesis is that the preferred model is random effects vs. the alternative the fixed effects (Green, 2008). It basically tests whether the unique errors (*ui*) are correlated with the regressors,

the null hypothesis is they are not. If Chi2< 0 is less than 0.05 (i.e. significant) use fixed effects, therefore the null hypothesis is rejected, the alternative hypothesis is accepted.

Summary and Conclusion

The impact of credit administration on profitability of commercial Banks in Nigeria was examined using panel data analysis. Results show that credit administration has significant positive impact on profitability of the sampled banks which implies that for every increase in loans and advances resulted to an increase in profitability of sampled banks. Also, customers' deposit has positive significant impact on profitability. In the same vein money transfer also has positive effect on profitability that is transfer of money from one costumer to other customers by the bank based on the instructions given by their customers enhanced profitability in sampled banks but it is not significant.

In conclusion, credit administration has strong and statistical significant positive impact on profitability of banking sector in Nigeria. In order to improve bank profitability there should be efficient management of credit administration. Banks should also focus on other revenue rivulet that will enhance the profitability of the bank apart from over reliance on interest income

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