

## Effects of Credit Management Techniques on the Performance of Selected Commercial Banks in Nigeria: A Study of First Bank PLC

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### Abstract

Effective credit management is a basic for an institution in financial sector performance. With declining performance of the institutions due to increasing competition and changing regulatory framework, credit quality is imperative for continued wellbeing of the institutions in terms of financial performance. Deposit money banks (DMBs) in Nigeria create loans from deposits from customers and these loans are major income generating source for majority of the banks. However, this intermediation function of DMBs in Nigeria is associated with enormous risks to both the banks and the deficit units. It is thus imperative for this study to examine the effect of credit management on the profitability of deposit money banks in Nigeria using first bank in FCT, Abuja as a study. Historical research design was adopted. Descriptive study design was adopted for this study; while the questionnaire employed contained closed-ended structured questions in a five-Likert scale format. Regression technique was used for the estimation of data generated through the structured questionnaire. Findings from the study showed that client appraisal have a significant effect on profitability of deposit money banks in Nigeria. More so, the study showed that credit risk control has a significant effect on profitability of deposit money banks in Nigeria; and collection policy has a significant effect on profitability of deposit money banks in Nigeria. Based on these findings, the study recommends that there is need for commercial banks in Nigeria to enhance their client appraisal techniques so as to improve their financial performance. Through client appraisal techniques, the commercial banks in Nigeria will be able to know credit worthiness of clients and thus reduce non-performing loans. There is also need for commercial banks in Nigeria to enhance their credit risk control. This may help in decreasing loan default levels. As regards to credit policy, the bank should also emphasize on collateral and the use of the reminders, insurance policy and the litigation to minimize costs resulting from investing in vulnerable clients and maximize returns.

Keywords: Deposit money banks, Profitability, Credit risk control, client appraisal and collection policy

## Introduction

The greatest hazard in business managing a credit is loaning cash and not getting it back as with every single money related foundation. Credit hazard specifically is one of the greatest attentiveness toward banks since a portion of the loaning is unsecured. In order to improve the operational performance and profitability, firms seek ways to improve their performance in operations in a bid to increase profitability. Accordingly, competition has also risen up as new technologies and new firm structures crop up. This has made firms seek new ways of lowering their operational costs to improve their profitability. In the same way, micro finance institutions financial performance is determined in terms of the profitability and their return on investment. Herrmann (2018) contends that firm profitability is usually determined by the organization earnings compared to its sales/owners and assets investment or the value in shares. This leads to common measures of profitability including return on equity (ROE), Income statements, Earnings per share (EPS), Return on total assets (ROA) and Price/Earnings ratio or P/E ratio.

Deposit money banks are exposed to a variety of risks among them; interest rate risk, foreign exchange risk, political risk, market risk; liquidity risk, operational risk and credit risk; and what banks does is to manage these challenges especially the credit aspect. In some instances, deposit money banks and other financial institutions have approved decisions that are not vetted; there have been cases of loan defaults and non-performing loans, massive extension of credit and directed lending. Policies to minimize on the negative effects have focused on mergers in banks, better banking practices but stringent lending, review of laws to be in line with the global standards, well capitalized banks which are expected to be profitable, liquid banks that are able to meet the demands of their depositors, and maintenance of required cash levels with the central bank which means less cash is available for lending. This has led to reduced interest income for the commercial banks and other financial institutions and by extension reduction in profits. Credit risk is the possibility that the actual return on an investment or loan extended will deviate from that, which was expected. Agu, & Ogbuagu (2015) defined credit risk as losses from the refusal or inability of credit customers to pay what is owed in full and on time. The main sources of credit risk include, limited institutional capacity, inappropriate credit policies, volatile interest

rates, poor management, inappropriate laws, low capital and liquidity levels, directed lending, massive licensing of banks, poor loan underwriting, reckless lending, poor credit assessment, laxity in credit assessment, poor lending practices, government interference and inadequate supervision by the central bank. To minimize these risks, it is necessary for the financial system to have; well-capitalized banks, exposure within acceptable limit in order to provide a framework of the understanding the impact of credit management on banks profitability.

Credit management is an essential process for any firm that engages in the business of credit. The process when done in the right manner ensures that the customer pays on services delivered. According to Myers and Berkley (2013) credit management practices are the strategies used by an organization to ensure that the level of credit in the firm is acceptable and it is managed effectively. It is part of financial management that comprises of the analysis of credit, rating of credit, classification and reporting of credit. Nelson (2012) defined credit management as the practices used by an organization to manage the sales they make on credit. It is an essential practice for all the organizations that have credit transactions since some have managed their credit activities so well that they have zero credit risk. Credit management is the strategies one uses to collect and control credit payments from clients. Myers and Berkley (2013) define these practices as the strategies that organizations use to have an acceptable level of credit and to manage this level effectively. It is part of financial management that comprises of the analysis of credit, rating of credit, classification and reporting of credit. When credit management is done right, then the capital with debtors reduces and the possibility of bad debts is also reduced. Edwards (2013) contends that if you are a business and you have not included into your selling price any costs associated with late payment or you have a way of recovering the costs by charging an interest, then your profits is bound to be affected by such costs. Some firms are tempted to provide credit when they think of the possibility of increased business operations. However, businesses have to be certain that there will be more revenue from the high sales that will outweigh the cost of credit to avoid losses.

Credit risk is one of significant risks of banks by the nature of their activities. Through effective management of credit exposure banks not only support the viability and profitability of their own business but also contribute to systemic stability and to an efficient allocation of capital in the economy (Psillaki, Tsolas, & Margaritis, 2010). Banking as a service industry is organized to make profit for the shareholders vide provision of banking services and supply of financial needs to individuals and cooperate bodies. In order to achieve this, banks accept deposits from customers and lend to others. According to Sayer, (2015), banks seek to make themselves as attractive as debtors and as efficient as creditors that they can earn a substantial gross income from the difference between the interest they charge as creditors and the interest they pay as debtors". Developments in the Nigerian economy in the last decade, specifically, from 2008 to date have had considerable impact on the functioning of the banks and other non-financial institutions. The decade witnessed a down - hill trend in the Nigerian economy, occasional dwindling oil revenue and the global financial recession. Banks as a sub-system of national economy is not immune and is having its own share in the form of increasing loan defaults because of the inability of borrowers to redeem their loans, which resulted in banks failure and subsequently banks distress. It is thus imperative for this study to investigate the impact of credit management on the profitability of deposit money banks in Nigeria.

The main objective of this study is to examine the effect of credit management on the profitability of deposit money banks in Nigeria.

The following propositions were formulated to guide the study:

H01: Client appraisal has no significant effect on profitability of deposit money banks in Nigeria

H02: Credit risk control has no significant effect on profitability of deposit money banks in Nigeria

H03: Collection policy has no significant effect on profitability of deposit money banks in Nigeria

## Literature Review

### Conceptual Framework

**Concept of Credit Management:** Credit management is one of the most important activities in any company and cannot be overlooked by any economic enterprise engaged in credit irrespective of its business nature. It is the process to ensure that customers will pay for the products delivered or the services rendered. Myers and Brealey (2013) describe credit management as methods and strategies adopted by a firm to ensure that they maintain an optimal level of credit and its effective management. It is an aspect of financial management involving credit analysis, credit rating, credit classification and credit reporting. Nelson (2012) views credit management as simply the means by which an entity manages its credit sales. It is a prerequisite for any entity dealing with credit transactions since it is impossible to have a zero credit or default risk. The higher the amount of accounts receivables and their age, the higher the finance costs incurred to maintain them. If these receivables are not collectible on time and urgent cash needs arise, a firm may result to borrowing and the opportunity cost is the interest expense paid. Nzotta (2014) opined that credit management greatly influences the success or failure of commercial banks and other financial institutions. This is because the failure of deposit banks is influenced to a large extent by the quality of credit decisions and thus the quality of the risky assets. He further notes that, credit management provides a leading indicator of the quality of deposit banks credit portfolio. A key requirement for effective credit management is the ability to intelligently and efficiently manage customer credit lines. In order to minimize exposure to bad debt, over-reserving and bankruptcies, companies must have greater insight into customer financial strength, credit score history and changing payment patterns.

Credit management starts with the sale and does not stop until the full and final payment has been received. It is as important as part of the deal as closing the sale. In fact, a sale is technically not a sale until the money has been collected. It follows that principles of goods lending shall be concerned with ensuring, so far as possible that the borrower will be able to make scheduled payments with interest in full and within the required time period otherwise, the

profit from an interest earned is reduced or even wiped out by the bad debt when the customer eventually defaults. Credit management is concerned primarily with managing debtors and financing debts. The objectives of credit management can be stated as safe guarding the companies' investments in debtors and optimizing operational cash flows. Policies and procedures must be applied for granting credit to customers, collecting payment and limiting the risk of non-payments.

Credit management process starts with receiving applications and finishes just when the borrower meets all obligations of repaying the loaned funds. Credit management cannot be a success if the loaned funds will not be received in full. Standards of good loaning state that lending institutions should be worried with guaranteed returns from loans, beyond what many would consider possible that the borrower can make planned instalments without delays or fail. Credit administration is concerned basically with financing obligations and overseeing indebted individuals. The essential destinations of credit administration can be pronounced as protected guarding of the clients' hazard and upgrading operational money streams. Approaches and methodology must be connected while agreeing credit to clients and amid the gathering of instalments.

Concept of Deposit Money Banks Profitability: Profitability is an indicator of banks' capacity to carry risk and/or increase their capital. It indicates banks' competitiveness and measures the quality of management (Adinde, 2014). Profitability is one of the key concepts in our research. This is due to the topic of this research is about the relationship between the profitability and credit management. Clear explanation to the profitability of deposit money banks is crucial for readers to understand the research procedure and meaning. The determinants of commercial banks' profitability can be concluded into two categories, namely those that are management controllable (internal determinants) and those are beyond the control of management (external determinants) (Guru, Staunton, & Balashanmugam, 1999). The internal determinants reflect upon banks' management policy and decision concerning sources and uses of funds management, capital and liquidity management and expenses management. This kind of profitability factors can be examined by financial statements of commercial banks (Guru et al., 1999).

The external factors are environment factors and firm-specific ones (Guru et al., 1999). This research mainly focuses on the analysis of internal determinants because our purpose is to test the effect of credit management to deposit bank's profitability. The determinants reflected upon credit management should be included into internal policy and decisions which can be examined by financial statements. On the other hand, bank's decisions are also affected by external regulation, thus this research also involves the consideration of external factors. The level of profitability is very significant for shareholders of a bank because it shows how effective management has utilized their investments (Devinaga, 2010). In determining the financial strength of a deposit money bank, the level of profitability is predominant. ROA and ROE are used as main profitability measures in most of the organizations including banks and financial institutions. The ROA demonstrates the level of net income produced by the bank and also determines how the assets utilized by banks generate profit over the years. On the other hand, the return on equity (ROE) is the ratio of net income to total equity indicating returns to shareholders on the book value of their investment. It measures the rate of return for ownership interest (shareholders)' equity of common stock owner, it tells how efficient a firm/bank is at generating profits from each unit of shareholder equity, also known as net assets or assets minus liabilities.

### Empirical Review

Several studies have been conducted on the impact of credit management on the performance of deposit money banks across different countries and in Nigeria. As with any financial institution, the principal risk in bank is lending money and not getting it back. On this note, Kagoyire and Shukla (2016) studied effect of credit management on performance of commercial banks in Rwanda (A case study of Equity Bank Rwanda LTD). The study sought to determine the effect of credit management on the financial performance of commercial banks in Rwanda. The study adopts a descriptive survey design. The target population of study consisted of 57 employees of Equity bank in credit department. The entire population was used; giving a sample size of size of 57 employees. Purposive sampling technique was used where the entire population was included in the study. Primary data was collected using questionnaires which were administered to the respondents. Descriptive and inferential statistics were used to analyse data. The study found that

client appraisal, credit risk control and collection policy had significant effect on financial performance of Equity bank. The study established that there was very strong relationship between financial performance of Equity bank and client appraisal, credit risk control and collection policy. The study also established that client appraisal, credit risk control and collection policy significantly influence financial performance of the bank. Collection policy was found to have a top effect on financial performance and that a stringent policy was more effective in debt recovery than a lenient policy. The study therefore recommends that Equity bank should enhance their collection policy by adapting a more stringent policy to a lenient policy for successful debt recovery.

In corroboration with Kagoyire and Shukla (2016) and Uwuigbe, Olubukunola & Babajide (2015) carried out a study on credit management and bank performance of listed banks in Nigeria. The study aimed to examine the effects of credit management on banks' performance in Nigeria. In achieving the objectives recognized in this study, the audited corporate annual financial statement of the listed banks covering the period 2007-2011 were analysed. A sum total of ten listed banks were selected and analysed for the study by adopting the purposive sampling method. However, in assessing the research postulations, the study adopted the use of both descriptive statistics and econometric analysis, using the linear regression methodology consisting of periodic and cross sectional data in the estimation of the regression equation. Results 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, relationship between secured and unsecured loan ratio and bank's performance was not significant. Hence, the study recommends that banks management should put in place or institute sound lending framework, adequate credit administration procedure, and an effectual and efficient apparatus to monitor lending function with an established rule. Femi, Marshal, and Ayodele (2015) researched on credit risk management and bank performance in Nigeria. This study investigated the impact of credit risk on banks' performance in Nigeria. A panel estimation of six banks from 2000 to 2013 was done using the random model framework. Result from the study showed that credit risk is negatively and significantly linked to bank performance; measured via return on assets (ROA).



This result suggests that an increased exposure to credit risk reduces bank profitability. It was also found that total loan has positive and significant impact on bank performance. Therefore, to shoot the cyclical nature of non-performing loans and increase their profits, the banks should implement an aggressive deposit mobilization to increase credit availability, and develop a trustworthy credit risk management strategy with adequate penalty for loan payment defaults. In Kenya, Mutisya (2015) studied effect of mitigating credit management on performance of commercial banks in Kenya: A case of Chuka Town. The study aimed at investigating the effect of mitigating credit risk to the performance of commercial banks currently operating in Chuka Town in Tharaka Nithi County. The study was descriptive in nature. The study opted for both primary and secondary forms of data. The secondary data was collected from the documentations accessible from the banks, and the primary data from various banks using questionnaires. Data was analysed using descriptive statistics involving percentages. The study found out that the banks had policies and strategies of mitigating credit risk which has direct impact on their performance with the credit section being acknowledged as the most important sector in the banking section. This is owed to the fact that credit was the major investment that is being undertaken by commercial banks. Although all this are well-known by commercial banks still stress need to be put up for all credit risk policies to be observed carefully as still commercial banks experience risks that lead to heavy losses. Also, it was found that there was a significant relationship between bank performance, and credit risk management (in terms of risk identification, monitoring and credit sanctions).

Beck, Jakubik and Piloni (2013) in a study on Non-Performing Loans (NPLs) in 75 countries argue that over the past decade, the credit quality of loan portfolios across most countries in the world remained relatively stable until the financial crises hit the global economy in 2007-2008. Since then, average bank asset quality deteriorated sharply due to the global economic recession. Yet the deterioration of loan performance was very uneven across countries. Beck, Jakubik and Piloni (2013) were interested in explaining these differences in bank asset quality across countries and over time. In their findings they found no the direct impact of share prices on NPLs and

posited that the impact was less obvious. They further argued that to the extent that share prices are correlated with house prices they supposed that their findings could reflect the notion that a drop in the value of collateral for housing loans could negatively affect the loan quality of consumer loans. Mekashia (2011) investigated the credit management and its impact performance on Ethiopian Commercial Banks. The researcher used 10 years panel data from the selected commercial banks for the study to examine the relationship between ROA and loan provision, non-performing loans and total assets. The study revealed that there is a significant relationship between bank performance and credit risk management. Ben-Naceur and Omran (2018) in an attempt to examine the influence of bank regulations, concentration, financial and institutional development on commercial banks' margin and profitability in Middle East and North Africa (MENA) countries from 1989- 2005 have found that bank capitalization and credit risk have positive and significant impact on banks' net interest margin, cost efficiency and profitability.

Abiola and Olausi (2014) investigated the impact of credit risk management on the performance of commercial banks in Nigeria. Financial reports of seven commercial banking firms were used to analyze for seven years (2005–2011). Panel regression model was employed for the estimation of the model. In the model, return on equity (ROE) and return on assets (ROA) were used as the performance indicators while non-performing loans (NPL) and capital adequacy ratio (CAR) as credit risk management indicators. The study revealed that credit risk management has a significant impact on the profitability of commercial banks in Nigeria.

### Theoretical Framework

**Portfolio Theory:** Since the 1980s, banks have successfully applied modern portfolio theory (MPT) to market risk. Many banks are now using earnings at risk (EAR) and value at risk (VAR) models to manage their interest rate and market risk exposures. Unfortunately, however, even though credit risk remains the largest risk facing most banks, the practice of MPT to credit risk has lagged (Margrabe, 2007). Under the portfolio theory, traditionally banks have taken an asset-by-asset approach to credit risk management. While each bank's method varies, in general this approach involves periodically evaluating the credit quality of loans and other credit exposures, applying a credit risk rating, and aggregating the results of this analysis to identify a portfolio's

expected losses (Gakure, Ngugi, Ndwiga & Waithaka, 2012). According to Gakure et al (2012) the foundation of the asset-by-asset approach is a sound loan review and internal credit risk rating system. In this approach a loan review and credit risk rating system enable management to identify changes in individual credits, or portfolio trends in a timely manner (Gakure et al, 2012). Based on the results of its problem loan identification, loan review, and credit risk rating system management can make necessary modifications to portfolio strategies or increase the supervision of credits in a timely manner (ibid). While the asset-by-asset approach is a critical component to managing credit risk, it does not provide a complete view of portfolio credit risk, where the term risk refers to the possibility that actual losses exceed expected losses. Therefore, to gain greater insight into credit risk, banks increasingly look to complement the asset-by-asset approach with a quantitative portfolio review using a credit model. Banks increasingly attempt to address the inability of the asset-by-asset approach to measure unexpected losses sufficiently by pursuing a portfolio approach. According to Essendi (2013) the portfolio has a basic assumption that investors often want to maximize returns from their investments for a given level of risk and provides a framework for specifying and measuring investment risk and to develop relationships between risk and expected returns. One weakness with the asset-by-asset approach is that it has difficulty identifying and measuring concentration. Concentration risk refers to additional portfolio risk resulting from increased exposure to a borrower, or to a group of correlated borrowers.

The traditional portfolio approach uses two methods, namely the expert method and the credit scoring models in the expert system; the credit decision is left in the hands of the branch lending officer. His expertise, judgment, and weighting of certain factors are the most important determinants in the decision to grant loans. The traditional approach to the assessment of credit proposition of borrowers is based on the heuristics or intuition of the loan officer. Heuristic decision-making is, however, not necessarily arbitrary or irrational because it is based on years of experience that enable individuals to identify solution quickly without going through an analytical process (Rosli, 2000). The 5Cs of credit are always used by banks to assess the creditworthiness of the potential borrower. The 5Cs of credit refer to Character, Capacity, Conditions, Collateral and Capital (Dev, 2009).

Character assessment is performed to determine the willingness and desire of borrowers to repay debt. Capacity is described as the borrower's capacity to borrow and also his repayment capacity. Economic conditions will also affect the borrower's ability to repay the loan. A bank will normally ask for collateral as security against the loan. Capital requirement of the business indicates the financial net worth of the borrower. The loan officer can examine as many points as possible but must include these five Cs in addition to interest rate. In order to estimate default probability credit scoring models, use statistical and mathematical methods (Togtokh, 2012). Some writers note that the reason for this increased use of the scoring methods is that the methods are relatively cheap, bases on historical data and simple compared to modern approaches. For example, Mester (cited in Togtokh, 2012) revealed widespread use of credit scoring models showing that 97 percent of the banks use credit scoring to approve credit card application, whereas 70 percent of the banks use credit scoring in their small business lending.

**Transactions Costs Theory:** The theory was proposed by Schwartz (1974), this hypothesis deduces that providers may have a high ground over customary loan specialists in checking the credit value or genuine monetary circumstance of their clients. Providers additionally have a favored capacity to screen and pressure reimbursement of the credit. Every one of these superiorities may give providers a cost favourable position when contrasted and money related organizations. There are three wellsprings of cost preferred standpoint as characterized by Petersen and Rajan (1997); securing of data, controlling of the purchaser and rescuing esteem from existing resources. The main wellspring of cost preferred standpoint can be clarified by the premise that dealers can get data about purchasers at lower cost and speedier since it is acquired in the ordinary course of business. That is, the sum and recurrence of a purchaser's requests may give a provider a thought of the customer's circumstance; the purchaser's dismissal of rebates for early instalment may serve to caution the provider of a debilitating in his credit-value, and dealers generally visit clients more regularly than budgetary organizations.

## Methodology

The research was conducted through a historical research design. Historical research design is where the researcher explores, explains and understands past phenomenon from already existing data. This helped the researcher to arrive at conclusions about the effect of credit management on the profitability in order to explain the present and predict and control the future. The study adopted quantitative research approach which answered the "How" questions in the study, thus allowed the measurement of relationships between variables in a systematic and statistical method.

**Population and Sampling Techniques:** The population of the study are the staff of the 15 banks quoted on the floor of the Nigerian stock exchange as at 2018 (i.e. Access Bank Plc, Diamond Bank Plc, Eco Bank Plc, Fidelity Bank Plc, First Bank of Nig. Plc, First City Monument Bank Plc, Guaranty Trust Bank Plc, Polaris Bank Plc, Stanbic IBTC Bank, Sterling Bank Plc, UBA Plc, Union Bank Plc, Unity Bank Plc, Wema Bank Plc, and Zenith Bank Plc). Purposive sampling technique was used to select the staff of these banks based on the criteria that the banks: have availability of consistent data-set over the period.

**Method of Data Collection:** The study adopted the questionnaire as the data collection instrument to gather primary data from the field. The instrument will be keyed on five-point Likert scale format ranging from 1=strongly disagree, 2=Disagree, 3=Neutral, 4=Agree and 5=strongly agree. The instrument will be divided into two sections.

**Method of Data Analysis:** The regression method was adopted to find out the linear relationship between credit management and bank profitability. The justification for the use of regression method is because it measures the relationships existing between two or more variables. It is simple to compute without errors and it helps to illustrate the directional outcome and strength of the variable. It further shows a precise quantitative measurement of the degree of relationship between dependent and independent variables.

This estimation was achieved by the use of STATA statistical software. In-line with the research hypotheses, the following model was formulated:

$$PRF = \beta_0 + \beta_1 CA + \beta_2 CRC + \beta_3 CP + \mu_i \text{-----(1)}$$

Where;

- $\beta_0$  = The intercept
- $\beta_1 - \beta_3$  = Parameter estimates or coefficients for Client appraisal, Credit risk control and Collection policy
- PRF = Profitability
- CA = Client appraisal
- CRC = Credit risk control
- CP = Collection policy
- $\mu_i$  = Error term

### Results and Discussion

The three hypotheses formulated in this study were tested using the Z-statistics. The Z-statistics is a test of the significance of the variable used in the regression model; it is used to denote whether the impact of the explanatory (exogenous/ independent variables) actually have a significant influence on the dependent variable. The decision rule for accepting or rejecting the null hypothesis for any of these tests was based on the Probability Value (PV). If the PV is less than 5% or 0.05 (that is  $PV < 0.05$ ), it implies that the regressor in question is statistically significant at 5% level; otherwise, it is not significant at that level.

**Table 1: Regression Results**

Method	OLS-Approach				
Source	Sum of Square	DF	MSE	No. of obs	15
Model	5.09215396	3	5.09215396	F(1,15)	4.66
Residual	298.013301	12	1.09162381	Prob > F	0.0017
Total	303.105455	15	1.10622429	R-squared	0.7419
				Adj. R-squ.	0.5698
				D.W	1.7454

  

PRF	Coef.	Std. Err.	Z(PV)	[95% Conf. Interval]	
_Cons	2.124196*	0.222100	9.5641(0.0000)	1.9521442	2.355327
CA	0.365411*	0.112109	3.25941(0.0011)	0.0241543	1.452145
CRC	1.524789*	0.045121	2.21476(0.0035)	1.2548754	1.875412
CP	1.942114*	0.1325419	2.897542(0.0012)	1.7652216	2.578746

Note: \*, \*\* and \*\*\* indicate significant values test at 1%, 5% and 10% levels respectively

Source: Researchers Computation, 2019 (STATA 14)

Using the f-statistic, the study sought to investigate the multiple regression model whether it was valid or not. The F statistics was used to determine the model validity. The study found out that the model was valid  $F(3, 15) = 38.801, P < 0.001$ . Therefore, this implies that all the three predictors (of credit management) variables are good in explaining variation in profitability of deposit money banks. The study also sought to determine the model's goodness of fit statistics. The coefficient of determination as measured by the  $R^2$  (R-square) (63.0%) shows that credit management explain 63.0% of the total variation in profitability of deposit money banks. This implies that the stochastic disturbance error term ( $\epsilon$ ) covers 37.0%.

Durbin-Watson was used to test for the presence of serial correlation or autocorrelation among the error terms. The model also indicates that there is no autocorrelation among the variables as indicated by Durbin Watson (DW) statistic of 1.74 (as the acceptable Durbin - Watson range is between 1.50 and 2.50). This shows that the estimates are unbiased and can be relied upon for quality and sound investment and managerial decisions.

**Test of Hypotheses One:**

H01: Client appraisal has no significant effect on profitability of deposit money banks in Nigeria  
 Table 1 revealed that Client appraisal has a significant impact on profitability of deposit money banks. This was captured by the value of the Z-statistic (Z) 2.59 and an associated PV of 0.0011 which was found to be less than the 0.05. Therefore, the study rejects the first null hypothesis

(H01) and that client appraisal has a significant effect on profitability of deposit money banks in Nigeria

**Test of Hypotheses Two:**

**H02:** Credit risk control has no significant effect on profitability of deposit money banks in Nigeria

Table 1 also indicated that Credit risk control has a significant influence on profitability of deposit money banks as captured by the Z-statistic value of 3.17 and its associated PV of 0.00013 which was found to be less than 0.05. Therefore, the study rejects the second null hypothesis (H02) and concludes that credit risk control has a significant effect on profitability of deposit money banks in Nigeria

**Test of Hypotheses Three:**

**H03:** Collection policy has no significant effect on profitability of deposit money banks in Nigeria

Table 1 further indicated that Collection policy has a significant influence on profitability of deposit money banks as captured by the Z-statistic value of 3.17 and its associated PV of 0.00013 which was found to be less than 0.05. Therefore, the study rejects the third null hypothesis (H03) and concludes that collection policy has a significant effect on profitability of deposit money banks in Nigeria

**Discussion of Findings**

Findings from the study showed that client appraisal has a significant effect on profitability of deposit money banks in Nigeria. It established that client appraisal is a viable strategy for credit. This agrees with Abiola and Olausi (2014) whose findings suggest that credit management via client appraisal has a significant impact on the profitability of commercial banks in Nigeria. More so, the study showed that credit risk control has a significant effect on profitability of deposit money banks in Nigeria. This is in agreement with Ben-Naceur and Omran (2018) in who found that bank capitalization and credit risk control have positive and significant impact on banks' net interest margin, cost efficiency and profitability. Above all, the study revealed that collection policy has a significant effect on profitability of deposit money banks in Nigeria. This



is in line with the findings of Kargi (2011) whose findings revealed that credit risk management has a significant impact on the profitability of Nigerian banks.

### **Conclusion and Recommendation**

The main purpose of the study is to investigate the effects of credit management techniques on the performance of selected commercial banks in Nigeria. Client appraisal, credit risk control and collection policy, have been taken into account and the directions of their influence on the performance of loan have been hypothesized. The findings of the study concluded that client appraisal had positive and significant effect on the bank's performance. Collection policy and Credit risk control had also a positive and significant influence on the performance of the banks. These results are in line with the earlier findings as have been discussed in the literature. Based on the findings, the following recommendations were made: There is need for commercial banks in Nigeria to enhance their client appraisal techniques so as to improve their financial performance. Through client appraisal techniques, the commercial banks in Nigeria will be able to know credit worthiness of clients and thus reduce non-performing loans. There is also need for commercial banks in Nigeria to enhance their credit risk control. This may help in decreasing loan default levels. This may help in improving their financial performance. As regards to credit policy, the bank should also emphasize on collateral and the use of the reminders, insurance policy and the litigation to minimize costs resulting from investing in vulnerable clients and maximize returns.

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