

Credit Risk Management and Loan Recovery in Nigerian Deposit Money Banks

Sunny B. Beredugo¹, Clifford I. Akhuamheokhun², Bassey Ekpo¹

¹Department of Accounting and Finance, Arthur Jarvis University, Akpabuyo, Calabar., Nigeria

²Department of Accounting, Akanulbiam Federal Polytechnic, Ebonyi, Unwana, Nigeria

ABSTRACT

The quality of loan recovery in Nigerian deposit money banks is presently impaired with the incidence of a large portfolio of non-performing loans. The position of the banks to also act as prime movers of economic development and to effectively manage their credit risk, has not been effective; the study therefore examined the potency of credit risk management in addressing loan delinquency or high non-performing loan of deposit money banks in Nigeria. In view of this, investigation was conducted on the effect of credit risk architecture on loan recovery. Primary data was used for the study and the ordinary least square was used for data analysis and it was concluded that effective credit risk architecture could enhance loan recovery of deposit money banks in Nigeria.

KEYWORDS: Loan recovery, Deposit money bank, Credit risk, Loan delinquency

How to cite this paper: Sunny B. Beredugo | Clifford I. Akhuamheokhun | Bassey Ekpo "Credit Risk Management and Loan Recovery in Nigerian Deposit Money Banks"

Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-5 | Issue-2, February 2021, pp.1181-1186, URL: www.ijtsrd.com/papers/ijtsrd38430.pdf



IJTSRD38430

Copyright © 2021 by author (s) and International Journal of Trend in Scientific Research and Development Journal. This is an Open Access article distributed under the terms of the Creative Commons Attribution License (CC BY 4.0) (<http://creativecommons.org/licenses/by/4.0>)



1. INTRODUCTION

Banks, particularly in the developing economies play a catalytic role in mobilizing investible funds which aids economic growth. The extent to which banks succeed in meeting these expectations in the economic space is to a large extent dependent on their risk management structure. Lending is the principal business for most deposit money banks (Amene&Alemu, 2019). The loan portfolio is typically the largest asset and the predominant source of revenue. As such, it is one of the greatest sources of risk to a bank's safety and soundness. Banks operate in a rapidly innovative sector with a lot of pressure from competitors, economic factors (inflation rates, interest rates, exchange rates, etc.) and persistency for customers' satisfaction. This nature of banking business contains an environment of high risk with varying complexities. These risks are much more complex because a single activity can involve several risks (Hale, 2012).

Luy (2010:30) defines risk as "something happening that may have an impact on the achievement of objectives". Risks exist because of the inability of the decision maker to make perfect forecasts. It is also widely associated with the variability of future returns of a project or economic engagements. Banking risks are classified into credit risk, market risk, and operational risk (Basel, 2006). The focus of this study is on credit risk. This type of risk usually arises, whenever a lender is exposed to loss from a borrower, counterparty, or an obligatory who fails to honour his debt obligation as they have contracted.

The issue of credit risk is of greater concern because of the higher level of perceived risks resulting from some of the characteristics of clients and business conditions that they find themselves in. CBN (2011) further rightly noted that a recognized risk is less risky than the unidentified risk. Adequate management of credit risk is therefore critical for the survival and growth of all commercial banks.

Credit risk requires that the board and management understand and control the bank's risk profile and its credit culture. To accomplish this, they must have a thorough knowledge of the portfolio's composition and its inherent risks. According to Egene (2009), credit risk management needs to be a robust process that enables financial Institutions to proactively manage facility portfolios in order to minimize losses and earn an acceptable level of return for shareholders. Brown, Askew, Baker, Denvir, and Millett (2003:364), added that credit risk management is a "structured approach to managing uncertainties through risk assessment, developing strategies to manage it, and mitigation of risk using managerial resources."

Due to the importance of the credit risk management approaches, Philadelphia and Kraft (2000) stressed that Banks should make reference to the Basel III Accord to encourage them to upgrade these practices. The Basel Accord emphasized on credit risk management practices to include: establishing an appropriate credit risk environment; operating under a sound credit-granting process;

maintaining an appropriate credit administration, measurement and monitoring process and ensuring adequate controls over credit risk.

It follows therefore that, compliance with the Accord means a sound approach to tackling credit risk has been taken and this ultimately improves bank performance. It is against this background that this study examines the credit risk management approaches adopted by deposit money banks Nigerian during a ten years period ending in 2018.

Deposit money banks are expected to bridge the gap between the surplus and deficit units of the economy in order to encourage the flow of credits while limiting credit risk. This study was borne out of the fact that some banks are not adequately living up to the expectations of effective credit risks management. this

The quality of loans and recovery by deposit money banks are presently being impaired with the incidence of a large portfolio of non-performing loans, in spite of the provisions of the Basel II Accord. The position of the banks to also act as prime movers of economic development and to effectively manage their credit risk, have not been effective; if not, why then should banks be saturated with high nonperforming loans? Can effective credit risk architecture correct these anomalies? These are some of the issues addressed in this article. It is in view of this the study investigates the effect of credit risk architecture on loan recovery of selected banks in Nigeria.

2. LITERATURE REVIEW AND THEORETICAL FRAMEWORK

The study is underpinned on loan pricing and collateralized lending theories. The former is premised on the fact that if banks set interest rates too high, they may induce adverse selection problems because high-risk borrowers are willing to accept these high rates, which might invariably leads to delinquency (Carletti, Cerasi&Daltung, 2006); while, the mechanism of the latter is rooted in the binding role of collateral on the borrower which favours the alignment of his interests on the bank's interest (Saunders & Linda, 2002).

Management of credit risks has been identified to be critical for the survival and growth of banks. Credit risk infrastructure usually depends to a very large extent on the risk appetite and culture of the company. This architectural consideration revolves on maintaining tight credit risk metrics which largely need to be delivered in real time, depending on the product set and markets covered. Tight credit risk management means that there is a need to restrict the size of the individual manager (or group, smaller or larger) directional bias; it has to maintain well defined, monitored and acted upon drawdown limits (Coyle, 2000:47).

The framework of this article sets out that Banks are expected to issue an updated version of their credit risk management policy each year. This ensures that the overall credit risk management approach is in line with current best practice. In order to be successful, the Credit risk management architecture needs to be comprehensive. The credit risk architecture no doubt sets the tone for credit risk management organisation and arrangements. By this the board of directors will direct and monitor the activities of the credit management committee, who in turn reports to the board for evaluation in order to achieve greater success and the enhancement of credit quality (Coyle, 2000:47).

2.1. Credit Risk Management

The main source of credit risk include, limited institutional capacity, inappropriate credit policies, volatile interest rates, poor management, inappropriate laws, low capital and liquidity levels, direct lending, massive licensing of banks, poor loan underwriting, laxity in credit assessment, poor lending practices, government interference and inadequate supervision by the central bank (Kithinji, 2010). An increase in bank credit risk gradually leads to liquidity and solvency problems. Credit risk may increase, if the bank lends to borrowers it does not have adequate knowledge about. Although, Kishori and Jeslin (2017) discovered that credit risk management have a significant negative effect on the financial performance of the bank.

According to Chen and Pan (2012:16), credit risk is "the degree of value fluctuations in debt instruments and derivatives due to changes in the underlying credit quality of borrowers and counterparties". Credit risk management maximizes banks' risk adjusted rate of return by maintaining credit risk exposure within acceptable limits in order to provide framework for understanding the impact of credit risk management on banks' profitability (Kargi, 2011). Credit risk management is also "the identification, measurement, monitoring and control of risk arising from the possibility of default payment of a loan contract" (Twumasi, 2001:12).

Anaemeje (2007:16) opined that "horizon of development of credit, better credit culture, positive macroeconomic and business conditions lead to lowering of Non-performing Loans (NPLs)". In its annual report CBN (2010), noted that management of NPLs by banks remains an area of concern, particularly, due to the likelihood of worsening of the quality of restructured loans. The nonperforming loans of banks are an important criterion to assess the financial health of the banking sector. It reflects the asset worth, credit risk and competence in the allocation of resources to the productive sectors.

2.2. Risk Management Architecture

Risk system architecture is a system with a number of core components that collaborate and react to external events and perform required actions. Some of the core functions of the system include the ability to keep track of all the activities executed as part of the trading operation, the ability to track the most current risk profile as well as the "as-of-date" status at some point in the past (Taleb,1996). In order to support such functions, the system requires a complex infrastructure, made even more complicated by the requirements of the Sarbanes-Oxley acts which enforce complete auditing (Fabozzi, 1996). Simultaneously the system needs to be responsive enough so as to allow for ad-hoc user commands. By implementing these functions the risk system executes the actions needed such as estimating risk explanatory parameters, recalculating affected positions and keeping in line with the changing underlying prices and associated markets (Das, 1994).

Credit risk management architecture sets out the machinery for the day-to-day administration of risk assets. Although, the organizational structure of the lending function varies from bank to bank, the system adopted by a particular lending institution is largely determined by the board's attitude towards delegation of authority to the rank and file of loan officers, the character and quality of the lending officers, and the bank's size and its loan portfolio. The machinery for routine administration, in respect of the bank

is usually formulated along some general guidelines which include supervision, observance of covenants, margin requirements, excess lines, draw-downs, insurance and management of problem loans. These functions are executed by the various committees set up by the bank/ lender. In practice, there is usually a Directors' Loan Committee (DLC) as well as Officer Loan Review Committee (OLRC). The Directors' Loan Committee which is made up of the bank's MD, a senior loan officer and at least two board members is charged with such responsibilities as handling loan proposals beyond the scope of the OLRC and requests bordering on policy.

The OLRC is responsible for the continuous review of the bank's loan portfolio. It meets over troubled or distressed loans and reports to the Chief Executive and to the Board. It follows up on all weak loans until their weakness is corrected or the loan is collected. The OLRC in most banks has authority to reassign the loan if the officer is not making progress on the recovery. These two groups of loan committees are supported by Hampel, Coleman and Simpson, (1986). He submitted that two committees are necessary.

Banks, generally, have credit units or departments which perform crucial roles in the loan administration function. The department is supervisory in nature. It is separated from the credit approval function and serves primarily to advise or counsel both management and the credit officers. The credit risk architecture is a process involving the establishing of formal and legitimate policies and procedures that will ensure that: the proper authorities grant credit; the credit goes to the right people; the credit is granted for productive activities or for business or economic activities which are economically and technically viable; the appropriate size of credit is granted; the credit is recoverable and there is adequate flow of management information within the organization to monitor the credit facility (Kwaku, 2015).

The above interdependent process shows clearly that the tasked of having good quality loan portfolio is a primary responsibility of the Board and management of every lending institution which needs to set up policies and procedures that will lead to good loan underwriting and management systems to prevent the creation of loans that will eventually turn bad.

2.3. Non-Performing Loans and the Banking System in Nigeria

Goldstein and Turner (1996:26) stated that "the accumulation of Non-Performing Loans (NPLs) is generally attributable to a number of factors, including economic downturn, macroeconomic volatility, high interest rates, and excessive reliance on overly high-priced inter-bank borrowings, insider borrowing and moral hazard". Many contractors borrow from banks to execute their projects, some of these projects are often abandoned due to none or poor mobilization from the government, or individual who own the projects; the loans borrowed have also been classified as non-performing loans adding to the existing bad loans. Government who also borrow from banks for some projects but due to the poor priority of projects, most of these projects are often abandoned and repayment of such borrowed amount often became difficult.

Somoye (2010:15) said that "NPLs also bring down investors' confidence in the banking system, thereby

discouraging them from making reasonable investments". As far as the Nigerian banking sector is concerned, something has to be done seriously and urgently to bring back the confidence of bank customers in the sector. Confidence is one of the things banks must offer in order to get the patronage of customers.

It is also relevant to state that the macroeconomic environment has an impact on the assessment borrowers and their ability to have a loan. An economy in growth is favorable to an increase in revenues and a decrease in financial distress. As a result, real GDP growth and employment are negatively associated with the NPL. Conversely, unemployment is positively related to the NPL.

In relation to factors that affect NPL, Fofack (2005) finds evidence that economic growth, real exchange rate appreciation, the real interest rate, net interest margins, and inter-bank loans are significant determinants of NPLs in these countries. The author attributes the strong association between the macroeconomic factors and non-performing loans to the undiversified nature of some African economies.

2.4. Empirical Review

Al-Eitan and Tareq (2019) conducted a study on credit risk and financial performance of the Jordanian Commercial Banks in Amman Stock Exchange within the period of 2008 to 2017. This was premised on the ground that many banks within this sub region are still considering the Credit Risk management as a minor activity. This is evident in the weak regulation of Credit Risk and worsening credit standards in the Jordanian banking sector. A panel data analysis was employed to determine the impact of Credit Risk on performance using 16 listed banks. The results showed that Credit Risk (measured by the ratio of doubtful debts to total loans, non-performing loans and loan losses to total loans) has a negative and significant impact on ROA, and ROE. While, the total deposits and bank size have positive and significant impact on financial performance of these Jordanian commercial banks.

Agyei and Dasah (2012) carried out a study on the relationship between credit risk and profitability of some selected banks in Ghana. A panel data from six purposively selected commercial banks covering a five-year period (2005-2009) was analyzed within the fixed effects framework. From the results, credit risk (measured by non-performing loan rate, net charge-off rate, and the pre-provision profit as a percentage of net total loans and advances) had a positive and significant relationship with bank profitability. The findings indicated that banks in Ghana enjoyed high profitability in spite of high credit risk; contrary to the normal view held in previous studies that credit risk indicators are negatively related to profitability.

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 to 2008. 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.

METHODOLOGY

The study examined the credit risk management of deposit money Banks in Nigerian. It adopted the survey designs. This

design was used to examine the effect of credit risk architecture on loan recovery of deposit money Banks. The population of the study was 15 deposit money Banks in Nigeria that were operational between 2009 and 2019. The population for the survey research also consists of the credit risk management committee members of the 15 deposit money banks which are approximately 205. They have the ability to formulate strategy and policy based on credit risk appetite, credit risk attitudes and risk exposures. They also review credit risk management activities, track credit risk activity in the business units and keep the credit risk management context under review.

The judgmental sampling technique was used to select the 205 members of the credit risk management committee of the 15 deposit money banks. In this case, the population size doubles as the sample size.

The study therefore used the census sampling. The study used the primary data. The questionnaire instrument was adequately validated and the reliability result of 0.91 using the test-re test show that the instrument was reliable. In relations of method of analysis, the study used the OLS.

Model Specification

This model utilizes primary data on (credit risk Architecture) and loan recovery. The full specification of the regression equations are assumed to be as follows:

$$LR = \beta_0 + \beta_1CRA + \epsilon_1$$

LR=loan recovery; CRA=Credit Risk Architecture

DATA PRESENTATION AND ANALYSIS

Data Presentation

Table 1 presented the distribution of responses on credit risk architecture. Responses reveal that 205 copies of questionnaires were administered to the credit committee members of the 15 deposit money banks used. Out of that

number, only 205 copies of questionnaire were valid and used accordingly. This means that the analysis of primary data is based on 96.4 (194) percent rate of response.

Item 1 shows that 40.7% of the total sample strongly agreed that, banks carry out evaluation of exposure to credit risk before collateral. 36.9% agreed, 14.6% disagreed, 7.53% strongly disagreed, while 0.31% did not know. Item 2 has a response rate of 99.7% out of the total sample of 194. Out of these responses, 40.2% strongly agreed that collateral security evaluation are usually done before disbursement, 42.2% agreed, 11.5% disagree, 5.38% strongly disagreed, while 0.31% did not know.

Item 3 reveals that 82.5% of the respondents are affirmative that quarterly reporting of credit risk are done to ensure senior management awareness; (9.36% disagreed, 6.9% strongly disagreed) are not affirmative, while 0.61% do not know. The analysis of the data generated for item 4 reveals that 81.9% either strongly agree or agree to the fact that clear tolerance limits and risk appetite set at the Board level, are well communicated to the business units and periodically reviewed and monitored to adjust as appropriate. 17.05% were in disagreement, while 1.08% does not know. This buttresses the fact that information of credit risk are adequately communicated for proper adjustment. From the analysis of item 5, majority of the respondents, 82.7% are affirmative that Credit is only extended to suitable and well identified customers and never where there any doubt as to the ethical standards and record of the intending borrower. 15.8 % respondents were not in agreement; while 0.31% did not know. Table 2 contains information on the distribution of responses on loan recovery with items numbering 6 to 10. Items 6 to 10 revealed that more than 65 percent of the responses were affirmative that there is a high likelihood of credit risk assessment and other control measures in place.

Table 1 Percentage Distribution of Responses on Credit Risk Architecture

	SA	A	D	SD	Don't know	Total
1. Banks carry out evaluation of exposure to credit risk before collateral.	40.7%	36.9%	14.6%	7.53%	0.31%	100.0%
2. Collateral security evaluation are usually done before disbursement	40.2%	42.2%	11.5%	5.38%	0.31%	99.7%
3. Quarterly reporting of credit risk are done to ensure Senior Management awareness	43.1%	39.4%	9.36%	6.91%	0.61%	99.5%
4. Clear tolerance limits and risk appetite set at the Board level, are well communicated to the business units and periodically reviewed and monitored to adjust as appropriate.	44.1%	37.8%	9.52%	7.53%	1.08%	100.0%
5. Credit is only extended to suitable and well identified customers and never where there any doubt as to the ethical standards and record of the intending borrower.	40.6%	42.1%	8.6%	7.22%	0.31%	99.7%

Source: Field survey, 2020

Table 2 Distribution of Responses on Loan recovery

	SA	A	D	SD	Don't know	Total
1. The likelihood of the recovery ratio on defaulted obligation is quite encouraging.	41.8%	33.9%	15.5%	8.1%	0.61%	100.0%
2. The level of loan recovery from collateral is high.	38.8%	35.3%	14.9%	9.38%	1.84%	100.0%
3. The recovered loan by bank is in line with projections.	41.2%	35.5%	15.5%	6.60%	1.2%	100.0%
4. The internal rating score reflects the capacity of the credit risk architecture of the bank.	40.7%	32.9%	13.8%	10.3%	2.3%	100.0%
5. Collateral value are adjusted to reflect current par conditions	40.4%	33.7%	12.6%	10.8%	2.5%	100.0%

Source: Field survey, 2020

Model Summary on Hypotheses One

Table 3 Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	R ²	F	Sig.
	B	Std. Error	Beta					
1	(Constant)	7.545	4.121	1.830	.083	.770	55.8	.000 ^a
	LgCredit_risk_Arc	3.964	.121	32.760	.000			

a. Dependent Variable: lgloan recovery (credit risk)

Table 3 indicates the effect of Credit risk architecture on the loan recovery of selected banks in Nigeria. The coefficient of determination R² showed favorable fit of 0.770 with an adjusted R² of 0.725. This adjusted R² shows that only about 73 percent of the observed changes in the loan recovery was explained by changes in credit risk architecture. The result of the adjusted R-squared was not coincident, this is because the collective statistical significance that was valued with the F-statistics also revealed favorable levels of [F_{cal} = 55.865 > F_{cri0.05} = 3.84]. This however shows that our model has a high predictive power.

However, in order to evaluate the statistical significance of credit risk architecture on loan recovery of deposit money banks in Nigeria, the t-statistics value was used and it was discovered that the expected apriori expectation for the independent variables, confirmed the theoretical stance that credit risk architecture significantly affect the loan recovery of selected banks in Nigeria. In response to this hypothesis, the results revealed a t-statistic of [$t_{cal} = 32.760 > t_{0.05} = 1.697$] for credit risk architecture on loan recovery. This confirms that there is a significant effect of credit risk architecture on loan recovery of deposit money banks in Nigeria. This is also supported by the high result in our f-statistics that is more than our cut off point. To this end, Credit risk architecture significantly affects the loan recovery of selected banks in Nigeria. H₁ is therefore accepted and H₀ is rejected.

Summary, Conclusion and Recommendations

This study focused on credit risk management of deposit money banks in Nigerian. The result shows that credit risk architecture significantly affect the loan recovery of selected banks in Nigeria. This result culminates into the fact that adequate credit risk architecture enhances recovery of loan and adequate reduction of non-performing loans.

Management of credit risks has been identified to be critical for the survival and growth of banks. Credit risk infrastructure usually depends to a very large extent on the risk appetite and culture of the company. This architectural consideration revolves on maintaining tight credit risk metrics which largely need to be delivered in real time, depending on the product set and markets covered. In no particular order, tight credit risk management means that there is need to restrict the size of the individual manager (or group, smaller or larger) directional bias; it has to maintain well defined, monitored and acted upon drawdown limits.

Credit exposures arise principally in lending activities that lead to loans and advances. Banks are expected to adequately draw up a platform or architecture of managing risk inherent in loans and advances. This architecture in terms of planning and controlling on credit is usually carried out by Banks for preliminary screening of facility requests, detailed credit risk analysis, risk rating, risk triggered review for approval of facilities, controlled credit of approved facilities, processes and guidelines for developing credit

opportunities, and creating quality risk assets in line with the banks' risk management policies. This does not preclude credit risk minimization associated with non-performance of risk assets, clear requirements and guidelines for ongoing management of the risk asset portfolio and definition of individual risk exposures.

Effective credit risk architecture inculcates collateral management, facility performance monitoring, quality reviews, classification and risk portfolio reporting. The credit risk structure which is an embodiment of the architecture should be ready to always take deliberate action on a proactive basis to minimize the bank's loss on non-performing exposures. The credit risk architecture also manages loan quality; ensure that the banks' reputations are aligned with the bank's objective of conservative risk appetite that is balanced against a desire for reasonable returns. The credit risk structures of banks are also to take cognizance of the economic prevalence of its environment.

Based on the findings of the study, it was recommended that deposit money Banks should enhance their credit risk architecture to always include collateral review and management, facility performance monitoring, quality reviews, classification and risk portfolio reporting. Banks' credit granting decisions should be based on the results of the risk assessment, client's solvency, available collateral, and transaction compliance with policies; and Banks should endeavour to make credits available to the deficit unit at an affordable or moderate interest rate as a means of cushioning the effect of the dwindling state of the economy.

REFERENCES

- [1] Agyei, D. & Dasah, A. M. (2012). *Commercial Bank Risk Management: An Analysis of the Process*. Philadelphia: The Wharton School of the University of Pennsylvania.
- [2] Al-Eitan G. N. & Tareq O. B. (2019). Credit Risk and Financial Performance of the Jordanian Commercial Banks: A Panel Data Analysis. *Academy of Accounting and Financial Studies Journal* 23(5), 1-13
- [3] Amene, T. B., & Alemu, G. A. (2019). Determinants of financial performance in private banks: A case in Ethiopia. *African Journal of Business Management*, 13(9), 291-308.
- [4] Anaemeje, A. C (2007). Banking and Finance Professionalism in the 21st Century and Beyond. *The Nigerian Banker, Journal of the Chartered Institute of Bankers of Nigeria, (October-December ed.), 14-17.*
- [5] Basel II Accord (2009). Enhancements to the Basel II framework, July.
- [6] Carletti, E., Cerasi, V. & Daltung, S. (2006). Multiple-Bank Lending: Diversification and Free riding in Monitoring. *Department of Statistics Working Paper: UniversitadegliStudi di Milano- Bicocca.*

- [7] CBN (2011). CBN Monetary, Credit, Foreign Trade and Exchange Policy Guideline for 2011 Fiscal Year. *Monetary Policy Circular 31*.
- [8] Central bank of Nigeria (CBN) (2018). Annual Report. Retrieved from <http://:cbnbulletin>
- [9] Chen, K. & Pan, C. (2012). An Empirical Study of Credit Risk Efficiency of Banking Industry in Taiwan. *Web Journal of Chinese Management Review*, 15(1), 1-16.
- [10] Coyle, B. (2000). *Framework for Credit Risk Management*. United Kingdom: Chartered Institute of Bankers,
- [11] Das, S. (1994). *Swap & Derivative Financing: The Global Reference to Products, Pricing, Applications and Markets*. SA: Newland press.
- [12] Egene, M. (2009). *Banking Method and Processes*. Enugu: Hossana Publication.
- [13] Fabozzi, F. J. (1996). *Fixed Income Mathematics: Analytical & Statistical Techniques*. Greece: Pricy Press.
- [14] Fofack, H. (2005). Nonperforming loans in Sub-Saharan Africa: Causal analysis and macroeconomic implications, World Bank Policy Research Working Paper No. 3769, November.
- [15] Goldstein, M. & Turner, P. (1996). Banking Crises in Emerging Economics: Origins and Policy Options. *BIS Economic Paper*, 46.
- [16] Hale, R. H. (2012). *Credit Analysis – A Complete Guide*. New York: Wiley Inter science Publication.
- [17] Hampel, G. H., Coleman, A. B. & Simpson, G. O. (1986). *Bank management: Text and cases*. New York: John Wiley and sons.
- [18] Kargi, H. S. (2011). *Credit Risk and the Performance of Nigerian Banks*. Zaria: Ahmadu Bello University Press.
- [19] Kithinji, A. M. (2010). *Credit Risk Management and Profitability of Commercial Banks in Kenya, Nairobi*. Unpublished Thesis School of Business, University of Nairobi.
- [20] Kwaku, D. K. (2015). Assessing Credit Risk Management Practices in the Banking Industry of Ghana: Processes and Challenges. *Global Journal of Management and Business Research: C Finance*, 15(6), 1-11.
- [21] Luy, D. D. (2010). Evaluation of Credit Risk Management Policies and Practices in a Vietnamese Joint-Stock. *Journal of financier*, 21(2), 23-34.
- [22] Philadelphia, P. A. & Kraft, E. (2000). *The Lending Policies of Croatian Banks: Results of the Second CNB Bank Interview Project*.
- [23] Saunders, A. & Linda, A. (2002). *New approaches to value at risk and other paradigms*(2nded). New York: John Wiley & Sons, Inc.
- [24] Somoye, R. O. C. (2010). The Variation of Risks on Non-Performing Loans on Bank performances in Nigeria. *India Journal of Economics and Business*. 9 (1). 21-30
- [25] Taleb, N. (1996). *Dynamic Hedging*. Paris: Wesley Publisher.
- [26] Twumasi, P. A. (2001). *Social Research in Rural Communities* (2nded.). Accra: Ghana Universities Press.