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RESEARCH ARTICLE

Risk Analysis and Control in Bank through Credit Portfolio Management

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Abstract

This study is about risk analysis and control in bank's credit portfolio management. It involves ascertaining the role of bank staff towards risk control techniques in Nigerian banks. The study has the main objective of ensuring that banks do not go insolvent in their course of lending and also to ascertain the relationship between profitability in banks, bank's survival, customer retention and risk analysis and control. The relevant literature reviewed in chapter 2 of this work to establish the gaps that gave rise to the study. Prescriptive design was used in chapter 3 of which the questionnaire formed the primary data, while textbooks, magazines and journals made up the secondary data. Data collected was analyzed using descriptive statistics and quantitative analysis in chapter 4.Findings obtained in chapter 5 revealed that there in a relationship between risk analysis and control in banks and its profitability, survival and customer retention. Recommendations were based on findings.

Keywords: Credit Risk Management, Risk Analysis and Control, Bank Profitability, Bank Survival, Customer Retention.

1. Introduction

Banking is simply the business of safeguarding money and other valuables for their customers besides providing loans and offering Investment financial services [1]. According to Section 2 Subsection 1 of B0F (A) a bank is any company which is fully incorporated holds banking license issued by the central bank of Nigeria and performs the business of receiving deposits based on various available account drawing of collection of cheques, granting of loans and advances to customers and then any other duty charged by the authorities.

Banks play very important role in the development component of the financial system, they channel scare resources from surplus economize unit to deficit units. Thus to a reasonable extant they exert a lot of influence on the pattern and Trent of economic development through their lending and deposit mobilization [2-4]. These activities of later mediation it carries out to ensure that risk vital project lacks due to inadequate funds.

Credit creation is the main income generating activity for a bank but on the other hand this activity involves huge risk to both the lender and borrower.

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The creation of credit or deposit is one of the most important functions of a deposit money bank and like any other corporation bank aim profit [5-7] for this purpose they accept deposit and then give it out as loan on credit to other customer. This is done because no bank can n Survive without lending. Loans must be given out so that the bank can as well enjoying a certain amount of profit from us deposits.

Despite all these advantages banks stands to enjoy through their lending, there is still a huge risk attached, the risk of the customer not fulfilling his or her obligation as per the on due date or anytime thereafter can greeting jeopardize the smooth functioning of a bank business. The problems these banks encounter in lending is most problems of non-repayment of granted loans. Some of these problem arises as a result of poor loan management while some arise out of the fraudulent intention which makes a customer not willing to pay back [8]. This eventually focuses the bank to go into bad debt.

The provision of credit is the core function of every savings and credit is the core co-operatives society. The credit management function to a reasonable extent facilitates efficient management and administration of banks & loan in portfolio in order to ensure equitable contribution of funds and to encourage liquidity planning, in order to advice prudence and occupied best practice all these is expected to achieve some goals like to establish a fair. Loaning system establish efficient credit admiration procedure and assist in proper recovery of loan funds and finally to guide staff and board in loaning process.

In all these expectation many banks have collapsed while some are facing new collapse because of subprime leading to firms and people with bad and unreliable credit. Ayodele and Alabi [9] contributed that the banking cases in Nigeria have risk but the risk differ across banks. The CBN Governor in 2009 (Sanus, Lamido) maintained that some banks never found with liquidity Constrain thus their banking activities never reduced because of their response to perceived risk of lending to each other making profit and returns to suffer. This led not only to liquidity, credit shortage and significant loss of public confidence of banks but also affecting the entire financial system and the economy. The fact is that banks have a dominant position in developing economic financial system in a developing country like Nigeria and re engines of economic growth.

Lesson learnt from financial crises is now open to banks, government and even other businesses. Thus as a way out tide, the CBN in July 6, 2004, introduced measures to make the entire banking system a safe sound and stable environment that could sustain public confidence in banks [10]. According to the then CBN governor, it is now time to set up a structure that creates a strong base to the kind of economy we are operating where banks becomes a channel to do proper intermediation (the Obasanjo Economic Reforms on the banking sector 2005) Banks have in place standard practice for appraising and approving individual credit application in-spite of this, bad and doubtful debt still claims bulk charge on banks performance and has been stated before threatens the collapse of the effected banks.

This study then stands to examine the effect of risk analysis, control and management on the banks. The focus of risk management in quantitative view lies on the measurement and management of specific risk. We believe that a credit portfolio can diversify holdings of wars as to achieve simultaneously low risk and high returns. It has been preciously pointed out that no bank can survive without lending. Then to ensure that banks do not go indolent in their course of lending, it is then a necessity that a good risk analysis and control on bank credit should be carried out. To ascertain the level of relationship between the risk analysis and control in bank credit portfolio management and profitability in banks. To determine the relationship between the risk analysis and control in banks credit portfolio management and the survival of banks. To determine the extent of relationship between risk analysis and control in banks credit portfolio management and banks customers' retention.

2. Materials and Methods

2.1 Research Design

A Research Design is an arrangement of conditions for collection and analysis of data in a way that landlines their relationship. It is the overall strategy the researcher chooses to integrate the different variables of the study in a coherent and logical way thereby ensuring that research problem as effectively addressed.

Research design is a model of proof that allows the researcher draw inferences concerning casual relationships among component under investigation. Hence a design was used for this study i.e the combination of both Primary and secondary data.

2.2 Area of Study

Area of study refers to the geographical location covered by the study which may be stated in terms

of country state political zone local government Area and likes.

In the area of study the research is conceded with the area covered by the researcher in the course of coming out the work in the term of geographies. The geographical area used for the research work in Enugu State.

2.3 Source of Data

Two main sources of Data were used to collect information by the researcher. The sources were Primary and Secondary data.

In gathering the Primary Data, the researcher used sample survey of selected commercial bank. The sample Survey of the banks was considered necessary because it is through it that data required to test the stated hypothesis are to be generated. The primary sources of information were collected directly from respondent through questionnaire.

In addition to the primary data collected secondary data are obtained from research literatures and conceptual frame literature. From research literature related projects and research work were used in the conceptual literature data were obtained from textbook magazines internet serves papers and journals.

2.4 Population of Study

Population of the study as a census of all items in subject that possess the characteristics of that have knowledge of the phenomenon being studied. The population of the study consist of the bankers staff and management of Diamond Bank in Enugu State. The population of the study is 70.

2.5 Sampling Size and Sampling Technique

Sampling is the proportion of the population of the universe to be studied.

The sample is a given number or any proportion of a given population for generalization. The sample size is determined using the formula.

$$n = \frac{N}{1+10(e)^2}$$

Where n = Sample Size

N = Total population

E = Level of Significance

I = Unity Instrument

$$n= \frac{N}{1+N(4)^2}$$

$$n= \frac{70}{1+(70)(0.05)^2}$$

$$n= \frac{70}{1+0.175}$$

n=59.57= 60

2.6 Instrument of Data Collection

The basic instrument used in this study is the questioner. This involved the administration of these responses were analyzed and used to test the hypothesis from which valid decisions and conclusion were drawn.

2.7 Validity and Reliability of the Instrument

The questionnaires and information collected for research was thoroughly scrutinized and extremes by the project supervisor and professional within the field of financial and accounting before it was endorsed for presentation. The research work is also reliable as these is consistency and stability in the instrument used.

2.8 Method used for Data Analysis

The raw data collected from the selected commercial bank were translated into percentages, so as to enable the researcher draw a reasonable conclusion based on the information collected. Tables were also used to analyze the responses derived from the questionnaire.

All variables were analyzed with the use of the z- test formula.

$$Z = \frac{P - P\ 70}{\frac{P(1-P)}{n}} \quad \frac{P - P}{\frac{P - q}{n}}$$

Where P = Sample Size

P = Population Proportion

n = Sample Size

q = 1- Population Proportion

3. Results

3.1 Data Analysis

The data collected through the administered questionnaire are presented in a tabular form showing the variable used. Raw scores were converted into percentage for easy analysis. The hypothesis generated in the chapter one are tested in this chapter.

Table 1. *Analysis of Respondents characteristics*

Questionnaire	Respondent	Percentage (%)
Returned	50	80%
Not Returned	10	20%
Total	60	10%

From table 1: above 60 questionnaires were issued to the two different branches of Diamond bank and 80% of the questionnaire were returned while the remaining 20% of questionnaire issued were not returned.

Table 2. *Sex Distribution of Questionnaire*

Variables	Respondent	Percentage (%)
Male	37	72.4%
Female	23	27.6%
Total	60	100%

Table 2 above shows the gender distribution of respondents. It revealed that majority of the respondents were male and minority female

Table 3. *Age Distribution of the Respondents*

Variables	Respondent	Percentage (%)
Under 25yrs	10	16.7%
26-35yrs	25	41.7%
36-45yrs	20	33.3%
45-and above	5	8.3%
Total	60	100%

Table 3 shows the age distribution of respondent there was no respondent below the age of 20yrs. Majority of the respondents fall within the productive age bracket of 25-35yrs which 41.7% of the population while the minority was represented by 45yrs and above with a percentage of 8.3% of the total population.

Table 4. *Marital status of Respondent*

Variables	Respondent	Percentage (%)
Single	43	74.4%
Married	17	25.0%
Total	60	100%

Table 4 above shows that 74.4% of the respondents are single while a total of 25.6% of the population are married.

Table 5. *Category of Respondents*

Variables	Respondent	Percentage (%)
Bank staff	47	85.1%
Depositors/customers	13	14.9%
Total	60	100%

From table 5: above a total of 85-1% of bank staff of bank staff participated in the survey while 14.9% of the total population were customers.

Table 6. *Academic Qualifications of Respondents*

Variables	Respondent	Percentage (%)
OND	12	20
HND	12	20
B.Sc	15	25
M.Sc	15	25
Others	6	10
Total	60	100%

As represented above table 6 revealed the academic qualifications of the respondents. Data show that 20% respondents are OND holders, 20% are HND holders 25% are B.Sc holders 25% respondent are M.Sc holders 100% respondents hold other academic qualifications.

Section B

The research questions stated in chapter one will be analyzed in this section based on 50 questionnaires that were returned using the mathematical formula known as simple percentage (%)

Question 1: *Can the event of no risk analysis and control in banks credit portfolio Management result in banks low profitability or return to investment.*

Table 7. *Respondents were views on risk analysis and control in banks*

Responses	Frequency	Percentage (%)
Agree	37	74
Disagrees	13	26
Total	50	100%

From the table (74%) of the respondents were in the view that no risk analysis and control in banks can bring about low profitability or return while 26% remaining respondent believes it does not result in low bank profitability.

Question 2. *If your answer to question 1 is yes, to what do you think a good risk analysis and control in banks through credit portfolio management ensure profitability of banks in Nigeria.*

Table 8. *Respondents thought on risk analysis and control in banks through credit portfolio management ensure profitability of banks in Nigeria.*

Responses	Frequency	Percentage (%)
High	32	64
Low	18	36
Total	50	100%

From the table it was observed that 64% thinks that a good risk analysis through portfolio management can ensure profitability to a high extent while other 36% thinks otherwise.

Question 3. *To what extent can a good risk analysis and control in banks credit portfolio management ensure survival in banks in Nigeria.*

Table 9. *Respondents view on risk analysis and control in banks credit portfolio management ensure survival in banks in Nigeria.*

Responses	Frequency	Percentage (%)
High	37	74
Low	13	26
Total	50	100%

Table 9 shows that 76% respondent agrees that a good risk analysis and control in bank through credit portfolio management can ensure survival of banks to a high extent while 26% respondent thinks it is of low extent.

Question 4. *Can a good risk analysis and control in banks through credit portfolio management ensure retention of customers by bank in Nigeria.*

Table 10. *Respondents view on good risk analysis and control in banks through credit portfolio management ensure retention of customers by bank in Nigeria.*

Responses	Frequency	Percentage (%)
Yes	40	80
No	10	20
Total	50	100%

Table 10 shows that 80% respondent agree that a good analysis and control of risk can ensure customer retention by banks while the remaining 20% respondent does not agree.

Question 5. *Do you think it is necessary for a bank to diversify its loan portfolio:*

Table 11. *Respondents thought on necessity for a bank to diversify its loan portfolio:*

Responses	Frequency	Percentage (%)
Yes	40	80
No	10	20
Total	50	100%

Table 11 shows that 80% respondents agree that it is necessary for a bank to **diversify its loan portfolio while 20% disagree to it.**

Question 6. *In your opinion do you think the quality of a bank loan portfolio can be enhanced through effective risk diversification***.**

Table 12. *Respondents thought on the quality of a bank loan portfolio can be enhanced through effective risk diversification.*

Responses	Frequency	Percentage (%)
Yes	29	58
No	21	42
Total	50	100%

Table 12 shows that 58% of the respondent says yes to enhancement quality of banks loan portfolio through effective risk diversification while 42% say no to it.

Question 7. *Do you think that the reason for most insolvent commercial bank is as a result of non. Performing loan portfolio*

Table 13. *Respondents thought on the reason for most insolvent commercial bank is as a result of non. Performing loan portfolio*

Responses	Frequency	Percentage (%)
Yes	32	64
No	18	36
Total	50	100%

Table 13 show that 64% respondent agree that the reason for most insolvent commercial bank is as a result of non-performing loan portfolio the remaining 36% does not agree.

Question 8. *If yes to you think a good credit portfolio management can enhnce and help attain solvency of banks.*

Table 14. *Respondents thought on good credit portfolio management can enhnce and help attain solvency of banks.*

Responses	Frequency	Percentage (%)
Yes	27	69
No	23	31
Total	50	100%

Table 14: shows that 69% of the respondent agree that a good credit portfolio management can enhance and help attain solvency of bank while the remaining 31% disagree.

Question 9. *Does government policy have impact on the lending ability of a bank*

Table 16. *Impact of government policy on the lending ability of a bank*

Responses	Frequency	Percentage (%)
Yes	35	79
No	15	21
Total	50	100%

Table 16 shows that 79% respondent agrees that government policy have impact on bank lending which the other 21% remaining does not agree.

Question 10. *In your opinion do you think that a good risk analysis & control through credit portfolio management can enhance growth in the banking industry as a whole*

Table 17. *Respondents thought on good risk analysis & control through credit portfolio management can enhance growth in the banking industry as a whole*

Responses	Frequency	Percentage (%)
Yes	40	80
No	10	20
Total	50	100%

Table 17: shows that 80% agree and the remaining 20% disagree.

Test of Hypothesis

In this section, the hypothesis stated in chapter one will be tested for acceptance or rejection.

The formulated hypothesis is coined at finding out of risk Analysis and control of banks through credit portfolio Management. This will be tested using the Z-test statistics which is presented thus.

$$Z = \frac{P - P}{\frac{P(1-P)}{n}} \qquad \frac{P-P}{\sqrt{(PQ/n}}$$

Where P = Sample Proportion

P = Population Proportion

n = Sample Size

Q = Population Proportion

The decision rule states that if the calculated Z-test is greater than the tabulated value, you reject the null hypothesis (Ho) otherwise accept alternative (Ho)

Hypothesis 1

Question 2 was used to test this hypothesis namely:

(Ho) A good risk analysis and control in bank through credit portfolio management does not ensure bank portability.

(H1) A good risk analysis and control in bank & through credit portfolio management is going to ensure the bank profitability.

Responses	Frequency	Percentage (%)	D
Agree	32	64	0.64
Disagree	18	36	0.36
Total	50	100%	1.00

P= Square proportion sample size 50/60

$$= \frac{P - P}{\frac{P(1-P)}{n}} \qquad \frac{P-P}{\sqrt{(PQ/n}}$$

$$= \frac{0.83-0.64}{\sqrt{0.64(1-0.64/50}} = \frac{0\,.\,19}{\sqrt{0.2304/50}}$$

$$\frac{0.19}{V0.0046} = \frac{0.19}{0.06} = 3.1$$

Therefore the Z-test calculated is 3.1

Since the Z-test calculated 3.1 is greater than Z-test tabulated ( ) we reject the null hypothesis and accept the alternative which implies that a good risk analysis through credit portfolio management have an effect on banks profitability.

Hypothesis 2

Question 3 was used to test this hypothesis namely

(Ho) A risk analysis and control through credit portfolio management does not ensure survival of banks in Nigeria.

(H1) A risk analysis and control through credit portfolio management do have an effect on the survival of banks.

Decision Rules

Responses	Frequency	Percentage (%)	
Agree	**37**	**76**	0.76
Disagree	**13**	**26**	0.26
Total	50	100%	1.00

P Square Proportion same six 50/60 = 0.83

$$= \frac{P - P}{\frac{P(1-P)}{n}} \qquad \frac{P-P}{\sqrt{(PQ/n}}$$

$$= \frac{0.83 - 0.26}{\frac{\sqrt{0.26 - 0.26}}{50}} \qquad \frac{0.57}{\frac{\sqrt{0.1924}}{50}}$$

$$\frac{0.57}{0.00385} \qquad \frac{0.57}{0.06} = 9.1$$

Therefore the z-test calculated is 9.1

Decision Rule

If Z-test calculated is greater than Z-test tabulated we reject the null hypothesis

Decision

Since the Z-test calculated (9.1) is greater than z-test tabulated (0.1924) we reject the null hypothesis which states that risk analysis and control through credit portfolio management does not have an effect on the survival of a bank.

Responses	Frequency	Percentage (%)	D
Agree	**40**	**80**	0.08
Disagree	**20**	**20**	0.02
Total	50	100%	1.00

P-square proportion sample size 50/60 = 0.83

$$= \frac{P - P}{\frac{P(1-P)}{n}} \qquad \frac{P-P}{\sqrt{(PQ/n}}$$

$$= \frac{\mathbf{0.83} - 0.08}{\frac{\sqrt{0.08\,(1-0.08)}}{50}} = \frac{0.75}{\frac{\sqrt{0.0734}}{50}}$$

$$\frac{0.75}{0.001472} = \frac{0.75}{0.04} = 18.75$$

Therefore the Z-test calculated is 18.75

Decision Rule: If Z-test calculated is greater than Z-test tabulated, we reject the null hypothesis

Decision

Since the Z-test calculated (18.75) is greater than (0.0734) we reject the null hypothesis and accept the alternative which states that customer retention will be ensured through risk analysis and control.

Discussion of Fndings

In conclusion we accept (Hi) alternative and reject

(Ho) null because the calculated is always greater than the tabulated.

4. Discussion

The survey carried out in the previous chapter of this work was used to analyze and answer the questions which were raised in the first chapter of this study.

It was observed from the survey that a large percentage of respondents (64%) agreed that a good risk analysis control through portfolio management can ensure profitability to a high extent while a lower percentage of the respondents (36%) disagreed. This enabled the researcher to reach an agreement that it is positive to say that this study can actually to a high extent ensure profitability in banks.

The researcher also observed the second research question which examined the extent to which a good risk analysis and control through portfolio management can ensure survival of banks Nigeria. The result showed that a larger part of the respondents (76%) affirmed while the remaining part (24%) disagreed. It enabled the researcher to label the result positive.

Again the researcher cane out with a positive result for the third question raised with the total percentage of 80% which agreed and the remaining 20% which disagreed that a good risk analysis and control in bank through credit portfolio management can ensure retention of customers by banks in Nigeria.

5. Conclusion

In conclusion, it is pertinent to say that a good risk analysis and control in banks credit portfolio management will achieve and maintain to a high extent profitability in banks, ensure survival/going concern, and also maintain customer retention in Nigerian banks.

This is on the basis of the fact that it was tested using the techniques and patterns mentioned in the methodology of this work and it resulted that they all turned out positive.

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