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CREDIT RISK MANAGEMENT IN THE PERFORMANCE OF BANKING

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ABSTRACT
Indian Deposit Money Banks' and Bank Lending Growth Over a 17-Year Period: An Empirical Investigation of the Quantitative Effect of Credit Risk Management (1998-2014). The CBN Statistical Bulletin 2014 and the World Bank 2015 provided secondary data for the empirical investigation. A multiple linear regression model was used to examine the time series data in the investigation. There was a surge in funds for loans and advances as a result of solid credit management practices, which boosted the profitability of banks for investors and savers. Credit risk management has a little impact on the increase of total loans and advances made by Indian Deposit money institutions, according to the data. Since only credit worthy borrowers can access loanable money, the study' findings suggest that Indian DMBs comply carefully to their policy on credit appraisal. In this case, banks must make sure that money are provided to customers with good to excellent credit scores alone.

KEYWORDS: Credit risk, non-performing loans, Deposit money banks, Bank profitability

INTRODUCTION

Bank failures caused by default risk from customers have hurt many countries' economies, and this has had a detrimental impact on global growth. Credit risk is defined as the possibility that a borrower may default on the loan and fail to return the money borrowed. By using the phrase 'hedging,' we mean safeguarding a company's investments by lowering the level of risk they face. Diversification has long been believed to reduce risk by allocating financial resources among a variety of diverse investments. [1]

Commercial banks are vitally important because they play a crucial role in speeding up economic activity and growth in any country. They are fundamental. To summaries: a banking system that isn't working properly slows economic growth, exacerbates poverty, and increases the risk of negative economic effects by a wide margin. On the other hand, a banking system that works efficiently outpaces economic growth and thereby eradicates poverty from the root. Their position as a financial middleman is similar to that of blood vessels in the human body. [2]

Every business is motivated by performance, and organizations seek to be the best in whatever they do. When it comes to measuring performance, Adesugba and Bambale (2016) say it should include how well a firm is doing as well as insights into how it may do better. The ability of an organisation to use resources effectively and efficiently is referred to as its performance. [3]

Credit risk has spread rapidly during the last few decades. Small businesses borrow to expand their capacity, while consumers utilise credit cards for a variety of reasons. When

it comes to credit risk, it's the possibility that a bank borrower or counterparty would default on their obligations. CRM seeks to keep credit risk exposure below acceptable limits while increasing the bank's overall risk-adjusted return. Banks must manage both the overall portfolio credit risk and the risk associated with specific credits or transactions. Credit risk and other hazards should be taken into account by banks as well. [4]

The business of a bank entails some level of risk. A bank's ability to maintain a stable financial position depends on efficient risk management. Aligning banking's risk management framework with business strategy has thus become essential in the banking industry. If a borrower fails to make their payments as agreed, the bank has the danger of incurring a loss. This type of event is referred to as the default. Default risk is a different way of saying credit risk. In finance, credit risk refers to the possibility of losing principle or receiving a financial benefit as a result of a borrower's failure to repay a loan or otherwise comply with a contractual commitment. When a borrower anticipates using future cash flows to settle a present loan, credit risk occurs. The borrower or issuer of a debt obligation pays interest to the bank as compensation for taking on credit risk. [5]

LITERATURE REVIEW

In the following: Maurice Olobo, Steven Khoch, Protazio Sande, Gerald Karyeija (2021) The study's goal was to determine how Credit Risk Management Practices affect South Sudanese banks' performance. CRI, CRA, and credit risk control were all included while evaluating Credit Risk Management methods (CRC). For this study, researchers used a cross-sectional survey design with 124 participants from Juba's Credit process from seven different banks. structured questionnaires and interview guides using clustering, purposive and sample random sampling approaches to collect data. [6]

Adire Theodore Deng (2021) Our research examines the link between Credit Risk Management and financial institutions' performance in South Sudan, focusing on the latter. For example, we find that compliance with the Basel accord has a considerable impact on financial institutions' performance when using the ARDL model, but that the environment in which financial institutions manage their corporate credit risk and other risks has no effect. Credit risk operational methods, on the other hand, appear to have a negative but small impact on the country's financial institutions' performance. [7]

Innocent until proven guilty by jury-by-stander (2021) This research examines how risk management techniques affect the financial health of Lebanese banks. Because of Jordan's current financial and economic circumstances, several banks have been confronted with risk management techniques and loan default risks. Over 300 people were given questionnaires to complete as part of the study's quantitative approach, but only 123 of them returned them. There was a link found between risk management and financial performance when the data was put via regression analysis. Credit, liquidity, market risk, and financial performance were found to be closely linked. [8]

Mohammed Abu Afifa, and Isam Saleh According to Louis Murray(2020), his paper examines empirical evidence from a developing market to see how credit risk, liquidity risk, and bank capital affect bank profitability during a nine-year period (2010–2018). This research is based on panel econometric data analysed with GMM techniques.

According to the findings, credit risk, liquidity risk, and bank capital all have an effect on the profitability of a bank's operations. For both local and foreign bank managers, understanding the Basel rules and their importance is critical since enforcing them may boost a bank's efficiency while also protecting its profitability and shielding it from danger. [9]

J.N. Taiwo, E.G. Ucheaga, B.U. Achugamonu, Adetiloye, Okoye and Agwu (2018) Credit risk management has a little impact on the increase of total loans and advances made by Indian Deposit money institutions, according to the data. Since only credit worthy borrowers can access loanable money, the study' findings suggest that Indian DMBs comply carefully to their policy on credit appraisal. In this case, banks must make sure that money are provided to customers with good to excellent credit scores alone. [10]

CHALLENGES TO SUCCESSFUL CREDIT RISK MANAGEMENT

Data management that is inefficient. Delays might occur when the correct data is not readily available when needed.

- There is no framework for modelling group-wide risk. To acquire a comprehensive picture of group-wide risks, banks will need this information.
- The need for continuous rework Model parameters cannot be easily changed by analysts, resulting in excessive duplication of labour and a negative impact on the efficiency ratio of a bank.
- Inadequate risk management tools. Banks cannot identify portfolio concentrations or re-grade portfolios frequently enough to manage risk effectively without a robust risk solution.
- Difficulty in gathering and reporting data. Analysts and IT are overburdened by manual, spreadsheet-based reporting procedures.

METHODOLOGY

Data Collection Method/Techniques of Data Analysis

The CBN Statistical Bulletin 2014 and the World Bank Index (WDI) 2015 provided secondary data for the empirical investigation. A multiple linear regression model was used to examine the time series data in the investigation. In order to determine the relationship between the independent and dependent variables, OLS multiple regressions were performed. When analysing parameter estimations, we'll use the following statistics: Adjusted R2; Fcal; Standard Error; T-cal; and significance level of 5%.

Model Specification

Nonperforming loans, interest rate spreads, actual liquidity ratios, loans to deposit ratios, and money supply are all factors to consider when examining the relationship between the two.

Taking the implicit model as:

TLA = f (NPL, IRS, ALR, LTDR, M2) …1

Taking the explicit model as:

TLA =β0 + β1NPL + β2IRS + β3ALR+ β4 β5M2 + U … 2

Where:

Table 1: Relationship between non-performing loans and bank lending growth

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S/N	VARIABLE	EXPLANATION	REASON FOR INCLUSION
1.	Non-Performing Loan (NPL)	This shows the ability of the DMBs to manage credit risk. A lower NPL is an evidence of a good credit risk management strategy.	Indicator for sound credit risk management
2.	Interest Rate Spread (IRS)	This shows the difference between the cost of borrowing and return on saving (investment) by bank customers.	Cost benefit analysis
3	Actual Liquidity Ratio (ALR)	Represents the ratio of available funds a deposit money bank sets aside to protect itself from liquidity risk.	Liquidity Risk Analysis
4	Loan to Deposit Ratio (LTDR)	Loans to deposit ratio is the ratio of loans derived from deposits. Deposits are not the only source of loanable funds for a bank. The higher the loans the higher the value of bank assets.	Analysis of depositors Contribution tototal loan
5.	Money Supply (M2)	Money supply is the amount of loanable funds available to the banks and the entire economy.	Loanable fund contribution tothe bank & economy
6.	Error Term (U)	Represent disturbances in the sample population. This represents variables not adequately captured by the estimation technique.	
7.	β0; β1; β2; β3; β4; β_5 = coefficients	These symbols represents coefficient of the independent variables	

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Table 2: Estimation of Results and Interpretation

Variables	Coefficient	t-stat	P>|t|	Standard error	[95% conf. Interval]
NPL	25.31138	1.25	0.239	20.30868	[-19.38771 70.01048]
IRS	-166.7504	-1.68	0.121	99.32799	[-385.3699 51.86899]
ALR	51.37493	1.17	0.266	43.80236	[-45.03343 147.7833]
LTDR	66.82347	2.72	0.020	24.52808	[12.83752120.8094]
M2	.8180784	11.66	0.000	.0701551	[.6636681.9724887]
_cons	-6424.894	-1.42	0.184	4530.648	[-16396.78 3546.996]
R^2	0.9891				
Adju. R^2	0.9842				
F-stat	F(5, 11) = 200.30				
Prob > F	Prob > F = 0.0000				
ROOT M.S.E	516.49				

The Adjusted R2 is 0.98, indicating that the independent factors account for 98 percent of the changes in the dependent variable. At 200.30, the F-statistic shows that the independent variables explain the model's variability jointly. Only two independent variables were determined to be statistically significant at a 5% level of significance using t-stat values. To be considered statistically significant, money supply must be greater than 5% of total economic output. The total amount of loans and advances will increase by 81% if other variables remain unchanged. At a 5% level of significance, the loan-to-deposit ratio is statistically significant. The dependent variable will change by 6,682 percent if the loans to deposit ratio changes by a certain proportion. At a 5% level of significance, the relationship between non-performing loans and the dependent variable is statistically negligible. At a 5% level of significance, the interest rate spread is not statistically significant, and it has a negative relationship with the total amount of loans and advances. Liquidity to total loans and advances is linearly related, however at a 5% level of significance, the independent variable is not significant. At a 5% level of significance, the constant isn't statistically significant. Total loans and advances will be -6424 if all independent variables are zero.

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Table 3: Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

chi2(1)	0.79
Prob > chi2	0.3742

Table 4bDurbin-Watson d-statistic test for autocorrelation

Durbin-Watson d-statistic(6,	2.233126

There is no presence of autocorrelation in the model as the DW statistic is approximately

	NPL	IRS	ALR	LTDR	M2
NPL	1.0000				
IRS	-0.1185	1.0000			
ALR	0.0166	0.0254	1.0000		
LTDR	0.4619	-0.5541	-0.4139	1.0000	
M2	0.5784	0.1604	-0.6472	-0.2837	1.0000

There is no presence of perfect multicollinearity in the model.

OV test for omitted variables

Ramsey RESET test using powers of the fitted values of TLA, Ho: model has no omitted variables

F(3, 8)	**1.18**
Prob > F	**0.3755**

We accept the hypothesis that the model has no omitted variables.

ANALYSIS

Sound credit management practices were found to promote investor and saver confidence in banks, increase the amount of money available for loans and advances, and raise bank profitability. Non-performing loans were also found to have a beneficial impact on lending growth. This could be because depositors rarely assess a bank's ability to manage credit risk before making a deposit. There was also evidence that the interest rate spread had a negative relationship with the total amount of loans and advances because savers are reluctant to deposit cash with the bank when the deposit interest rate is too low and banks have difficulty finding reliable borrowers when the lending rate is too high. According to the findings, Indian DMBs' credit risk policies, evaluations, and analyses should be improved and maintained. In this case, banks must make sure that money are provided to customers with good to excellent credit scores alone. In the end, the most important factors influencing bank lending growth are money supply and the loan-to-deposit ratio. It's statistically inconsequential whether or not credit risk affects bank lending as shown in the overall amount of loans and advances. Deposit money banks' lending capabilities and profitability are influenced more by other factors including money supply and the loan-to-deposit ratio. Effective credit risk management allows banks to use their own revenues as a source of capital instead of significantly relying on external borrowings and liabilities

CONCLUSION

Savings and the Central Bank may have continued to expand the amount of money available for lending despite the size of the non-performing loan portfolio, according to the findings, which show that bank loans and advances may not be hindered by non-performing loans.

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