
Is there any Impact of Credit Management Practices on Bank Performance in PNG

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Abstract: Credit Management and Bank Lending practices were the paramount influential activities performed by every bank globally. These activities become major determinant factors for banking performance in commercial banks and private financial institutions in Papua New Guinea (PNG). Most banks have achieved unfavorable results due to a lack of effective credit management and lending practices. According to observations from various annual reports of commercial banks, default risk in terms of existing bad debt has resulted from poor credit management and lending practices. The primary objective of this study is to assess the impact of credit management and bank lending practices on the performance of banks. Specifically, the research examined the effects of interest rates, loan amounts, and loan terms on loan repayment by commercial banks in Papua New Guinea (PNG). The target population for this study was all commercial banks in PNG; however, due to the unavailability of publicly accessible annual reports, only four commercial banks were evaluated based on the available information from the financial years 2016 to 2023. Remarkably, the loans and advances section of the report has been evaluated in conjunction with the lending rate for the loan term available on the banks' website. This research adopted a regression model for the data analysis. The study findings showed that loan amount and loan term (lending practices) have a positive significant effect on loan repayment (banking performance). In contrast, interest rates (Credit Management) have a significant adverse effect on banking performance. The overall study highlights the proactive approach to managing credit risk and promoting transparent lending procedures to sustain banking performance. Several recommendations made in this study aim to improve the efficiency of credit management and lending practices, thereby enhancing the performance of banking.

Key Words: Credit Management, Lending Practices, Banking Performance, Interest Rates, Loan Amount, Loan Terms.

Author Biography:

Dr Viswanadham Nadiminti has vast experience in the higher education sector, with over one and a half decades of post-Ph. D. experience, having worked in four countries. He holds an M. Com in Accounting, an MBA in Finance, and PhD in Commerce from India. Published 25 papers in peer-reviewed journals and five books published, attended 20 international conferences around five countries. Successfully guided 5 Ph.D.'s as a principal supervisor and 140 supervisions of master's dissertations. Two significant major projects were completed, and he worked as Head of the department, external examiner, principal mentor for junior researchers' projects, and master's course coordinator.

1. INTRODUCTION

The Institute of Credit Management (ICM) was previously known as the Institute of Creditmen, which was founded in the United States (US) in 1939, as publications on Credit Management were only found there [Bullivant]. The Chartered Institute of Credit Management (CICM) came into existence after a Royal Charter was granted in 2014 to the ICM, which was previously known as the Institute of Credit Management and was founded in 1939 [BOROUGH]. The term "credit" has existed for over 3,000 years, predating the establishment of the ICM [Bullivant]. Major US companies recognized the importance of credit existence and the need for management and control in the 1960s, as it had a direct impact on accounts receivable [Edwards]. Lending performance was

relatively determined by the credit management process [Mirach]. Generally, credit management refers to the entire lending process, from identifying prospective customers to the successful or unsuccessful repayment of the credit [Mirach]. From a specific banking sector perspective, credit management encompasses activities such as accepting applications, loan appraisal, loan approval, monitoring, and recovery of non-performing loans [Shekhar]. However, from a commercial perspective, credit is money that a bank lends to earn interest in return [Achou]. In addition, a bank plays a vital role in implementing monetary policy in a country's economy, as widely agreed upon [Charles 1995].

Furthermore, it is also noted that commercial banks control the money supply through central bank policy. Similarly, the rate of interest and credit frequency affect a borrower's behaviour, which ultimately impacts the country's economic activities [Mansoor Dailam]. Generally, banks hold a larger portion of financial institutions in an economy [Mburu Irene et. al]; therefore, their performance can influence a country's economy [Bohnstedt]. In PNG, there was tremendous demand for credit in financial institutions from 1985 till recent years, based on a World Bank report. Small and Medium Enterprises (SMEs) in PNG have been moderate employers and contribute 50% of the GDP within the economy, according to [Wendy Morona].

The importance of credit management was emphasized by [Charles 1999] as follows: credit management requires special consideration. It is the determinant of the outcome of banks' performance. Similarly, credit management is vital, as lending is considered equivalent to investing in a borrower [10]. In the study by [Moch] for the bank in Indonesia, they employed two standard measures of credit risk: (i) the ratio of loan loss reserves to non-performing loans (LLR_NPL), and (ii) the ratio of net non-performing loans to total loans (NPL Net). Credit risk cannot be eliminated, but it can be minimized and mitigated through the process of investment diversification [Moch].

Credit management issues were present at both macro and micro levels, which determine the success or failure of every business, and in particular, financial institutions where lending is the primary activity for generating income, according to the study [Mirach].

In the PNG context, according to an update from the World Bank under the Papua New Guinea section, the rate of non-performing loans increased from the lowest of 2.5 per cent in 2008 to the highest of 6.16 per cent in 2021, resulting in a loss for the banks. Therefore, while managing those credit risks related to collecting, there are other factors such as corporate governance itself, state regulatory framework, principal factors, the cost involved in following up the credit and, of course, the uncertainty involved in the theft of the manual credit history of tracking the customers due to the lack of Technology. This research aims to provide insights into how factors under credit management and bank lending practices affect the banking performance of the various commercial banks in PNG. Due to the unavailability of financial information from other commercial banks, this study's findings are based solely on the annual reports of four commercial banks.

1.1 Objectives of the study

- To analyse credit management and its effect on banking performances
- To evaluate the effect of lending practices on banking performances

2. LITERATURE REVIEW

2.1 Theoretical Framework

The financial portfolio theory will be used in this project. In general, the Modern Portfolio Theory (MPT) was first proposed by economist Harry Markowitz in 1952. This theory superseded traditional stock selection, and its demonstration is likely to result in a portfolio with relatively low volatility [Markowitz]. Additionally, the review article by [Surtee] presents its findings on how recent investors have utilized the MPT, along with various risk-reward ratios, aiming to minimize risk while maximizing returns, drawing on available sources and strategies. Similarly, financial portfolio theory was found to be the most reliable approach for the bank lending process, aiming to achieve its set goals [Bennett]. He also found diversification to be a helpful strategy.

Credit management and banking performance:

According to [Incekara], the future of financial institutions and their financial stability depend mainly on the bank's ability to manage credit risk. He also emphasized that various factors influence credit risk, and his study suggested that the borrower's inability to repay the loan on time has become the primary factor affecting bank credit risk, resulting in high non-performing loans across multiple banks in the UAE, where all traditional banks were vulnerable to risk. Similarly, [Oranefo] studies suggest that in every banking industry, special attention should be given to credit administration for lending activities to make them a significant or core revenue-earning mechanism.

H1: Credit Management (Interest Rate) has an adverse significant effect on the Banking performance (Loan Repayment).

Lending practices and banking performance:

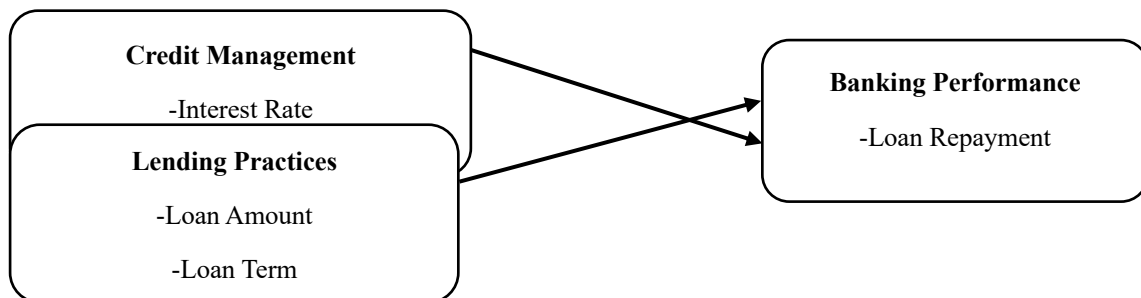
According to [Jose], his study found that lending procedures have been considered an important technique by most banks in tracking or detecting potential credit risk associated with borrowers before granting permission to lend excess finance, and it also helps identify the borrower's creditworthiness before the funds fall into the wrong hands. Likewise, capital control through monetary policy also strengthens bank lending in a way that debt inflows increase foreign reserves, and it avoids more lending towards riskier firms [Fabiani].

H2: Lending practices (Loan Amount) have a positive significant effect on the banking performance (Loan Repayment).

2.2 Research gap

Based on several global literature from experienced scholars and their findings related to the research title "Credit Management and Bank Lending Procedures" in general, several queries remain unanswered, and clarity is needed from different perspectives across different countries. The various perspectives arose from different understandings based on the types of government, the country's legal system, its level of economic development, technological aspects, and the different types of banks with their respective credit management systems. Despite those differences, credit management and lending practice were the main determinants of banking performance. However, the effectiveness and efficiency of these two major determinants were influenced by other factors, including lending policy, innovative Technology, political factors, global issues, interest rates, and others. There is likely no common practice that can be adopted globally, but it is the least likely for commercial banks to operate within a particular nation. Although banks compete with one another, this research aims to propose the most suitable lending policy that would be most satisfying from both the banks and the borrower’s perspectives. This research aims to fill the gap by providing insights into the factors that affect the banking performance of commercial banks in Papua New Guinea (PNG), as no article related to this topic has been published to date.

2.3 Conceptual Framework



3. METHODOLOGY

3.1 Research Design

This research employs a quantitative and descriptive research design to analyze the factors influencing overall banking performance, loan performance and repayment within the context of credit management and bank lending procedures in Papua New Guinea.

3.2 Data Collection

Secondary data were utilized for this analysis, which included data collected from publicly available financial reports, credit bureau datasets, and bank lending records. The selection criteria include datasets containing non-performing loans (NPL), debt-to-equity ratio, interest rate, loan amount, and the loan term. The data was extracted from bank annual reports.

3.3 Sample size

This study aims at the Four (4) commercial banks in PNG. Notably, the study focuses on the movement of financial performance and position, as well as loan performance, from the financial year 2016 to 2023.

3.4 Model specification

Multiple linear regression has been employed to analyze the variables in this study.

Multiple linear regression

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \dots + \beta_n X_n + \epsilon$$

- Y: Dependent variable
- β_0 : Intercept/Constant
- $\beta_1, \beta_2, \dots, \beta_n$: Coefficients for the independent variables
- X_1, X_2, \dots, X_n : Independent variables
- ϵ : Error term

Specification of model for this study

- **Dependent Variable:** Loan Repayment Amount (Y)
- **Independent Variables:**
 - Loan Amount (X_1)
 - Interest rate (X_2)
 - Loan Term (X_3)

3.5. Data Analysis

Table 1: Data Analysis Summary

Objective number	Objective	purpose	Method of achievement
1	To analyze credit management and its effect on banking performances.	To determine how interest rates in credit management systems are associated with banking performance.	Conduct linear regression analysis using interest rate as independent variable and banking performance as a dependent variable
2	To evaluate the effect of lending practices on banking performances.	To identify the relationship between loan term and loan amount required in lending procedure associated with banking performance.	Use linear regression analysis to assess how loan term and loan amount allowed affect loan repayment amount.

Source: Researcher, 2024

3.6 Validity

The data entry was done using SPSS software to extract the necessary figures for the correlation between the dependent and independent variables. The coefficient obtained from the SPSS has been used in the multiple linear regression formula to reveal the positive and negative relationships among the different variables.

4. DATA ANALYSIS AND DISCUSSION

Multiple linear regression analysis was conducted using SPSS software to identify and examine the relationship between credit management and bank lending practices, as well as their impact on banking performance in terms of loan performance. Only four banks were used as a sample size due to the availability of their annual reports from 2016 to 2023.

4.1 Data analysis and interpretation

Table 2: Descriptive statistics for Credit Management and Bank Lending Practices

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
LoanRepayment	32	488487	14802133	3642527.1	4900590
InterestRate	32	0.06	0.12	0.0956	0.01564
LoanAmount	32	491874	15448042	3805899.4	5167198
LoanTerm	32	1	8	4.5	2.32795
Valid N (listwise)	32				

Source: Researcher, 2024

The above result shows the general average mean and the standard deviation for different variables under the descriptive statistics. The result shows the General mean for the loan term, which is 4.5 years, with a minimum of 1 year and a maximum of 8 years, along with a standard deviation of 2 years. Similarly, the other variables follow the same procedures. The model summary results are presented in Table 3 below.

Table 3: Model summary for credit management and bank lending practices and its effect on banking performance.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error
1	1.000a	1	1	0
a) Predictors: (Constant)InterestRate, LoanTerm, LoanAmount				

b. Dependent variable: Loan Repayment

Source: SPSS Version 20, 2024

According to the data displayed in the model summary in Table 3 above, the R-squared value is 1. This demonstrates the perfect fit of the model, indicating that loan performance for the four commercial banks in Papua New Guinea is strongly dependent on these four variables: interest rate, loan amount, and loan term. Based on this model and data analysis.

The research also computed ANOVA analysis to confirm the models' efficacy and validity in illuminating the connection between commercial banks' loan performance in terms of loan repayment and credit management and bank lending procedures in terms of three (3) independent variables represented as Interest Rate, Loan Amount and Loan Term. Table 4 below presents the findings of the study's ANOVA model.

Table 4: ANOVA for Credit Management and Bank Lending practices and its effect on banking performance.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	7.44451E+14	3	2.482E+14	181516	.000b
	Residual	38278774890	28	1.367E+09		
	Total	7.44489E+14	31			
a Dependent Variable: LoanRepayment						
b Predictors: (Constant), LoanTerm, LoanAmount, InterestRate						

Source: SPSS Version 20, 2024

Table 4 above shows that the p-value is less than 0.05 and F = 181516. The p-value of 0.000 suggests that the null hypothesis for this analysis can be rejected. This shows that at least one group or variable mean is significantly different from others. This research also further analyzed the coefficient test. The Model coefficient is shown in table 5 below.

Table 5: Coefficient for Credit Management and Bank Lending practices and its effect on Banking Performance

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	93607.1	41629.438		2.249	0.033
	InterestRate	-1E+06	469386.129	-0.003	-2.298	0.029
	LoanAmount	0.948	0.001	1	732.386	0
	LoanTerm	9829.94	3173.264	0.005	3.098	0.004
a Dependent Variable: LoanRepayment						

b) Predictors: (Constant), Interest Rate, Loan Amount, Loan Term

Source: SPSS Version 20, 2024

From the research coefficient, the model developed is,
 $Y = 93607.1 + (-1E+06) \chi_1 + 0.948\chi_2 + 9829.94\chi_3 + \epsilon$

Where Y is Average Loan Repayment, X1 is Interest Rate, X2 is Loan Amount, and X3 is Loan Term.

Table 3 above shows that the Interest Rate (Beta 1 = - 1E+06, $p < 0.05$) has a significant and positive effect on banking performance. This is followed by the Loan Amount, with a beta coefficient of 0.948 ($p < 0.05$), indicating that the loan amount has a negative and significant impact on banking performance. Finally, the loan term (Beta 3 = 9829.94, $p < 0.05$) predicted that the Loan Term has a positive and significant influence on banking performance. Table 6 below displays the correlations for the variables.

Table 6: Correlation between credit management and bank lending practices and its effect on each variable.

		Loan Repayment	Interest Rate	Loan Amount	Loan Term
Pearson Correlation	Loan Repayment	1.000	.024	1.000	.119
	Interest Rate	.024	1.000	.026	.425
	Loan Amount	1.000	.026	1.000	.116
	Loan Term	.119	.425	.116	1.000
Sig. (1-tailed)	Loan Repayment	.000	.448	.000	.258
	Interest Rate	.448	.000	.445	.008
	Loan Amount	.000	.445	.000	.264
	Loan Term	.258	.008	.264	.000
N	Loan Repayment	32	32	32	32
	Interest Rate	32	32	32	32
	Loan Amount	32	32	32	32
	Loan Term	32	32	32	32

Source: SPSS Version 20, 2024

The results in Table 6 above depict the correlations between the variables of credit management and bank lending practices, expressed in terms of Interest Rate, Loan Amount, and loan term, which determine banking performance as measured by loan repayment. Based on the results of the correlation analysis for this study, a strong correlation exists between Loan Amount and Loan Repayment, with a Pearson correlation of 1. A weak correlation exists between Interest Rate and Loan Amount, with correlations of 0.024 and 0.119, respectively.

5. CONCLUSION AND RECOMMENDATION

5.1 Conclusion

This study concludes that bank's lending policies and credit management are positive condition factors in determining how banks function, particularly in loan repayment. The further results suggest that loan length and amount exert a positive influence on loan repayment. The higher the amount (in PNG Kina) and the longer the loan period, the more likely banks are to receive loan repayments on time. This positive correlation re-emphasizes the importance of structured lending processes in maintaining financial stability.

Higher interest rates can discourage borrowers from making their loan payments on time, potentially leading to an increase in non-performing loans. This occurs because elevated interest rates negatively affect the ability to repay loans. The banking sector must manage interest rates carefully, as the observed negative relationship between interest rates and loan repayment underscores the need for this approach. The (R-square=1) in the model summary shows that the model is a perfect fit for the study as well as the variable are the perfect fit to determine the banking performance. This suggests that enhancements or improvements in credit management and lending practices have a greater likelihood of enhancing the performance of the banking sector in Papua New Guinea.

Technology and macroeconomic factors are also becoming qualitative measures that can influence commercial banks' decision-making. In conclusion, transparent credit management systems and lending practices are needed to ensure the growth and profitability of commercial banks.

5.2 Recommendation

5.2.1 Managerial Implication

Managers should be considerate in structuring the loan, modifying the credit policy, and adopting relevant Technology.

5.2.2 Economic Implications

Support for SMEs

As the country is in the development stage, SMEs make a significant contribution to the country's GDP. According to the fact stated above in the introduction, SMEs contribute 50% of the economy's GDP. Hence, improving accessibility to finance their operations and allowing favourable lending terms can enhance their performance, and as a result, it leads to larger economic growth.

Interest Rate Adjustment

Regulators or bank managers should consider setting an affordable interest rate to prevent it from becoming a hindrance to borrowers. With this, the interest rate must encourage repayment while simultaneously covering the risk of default by commercial banks.

5.2.3 Society Implications

Financial Inclusion

In every developing country, including Papua New Guinea (PNG), one of the significant issues that individuals and businesses encounter is difficulty in accessing finance to meet their daily needs. Financial inclusion is made possible with the help of FinTech, allowing borrowers to access funds without geographical limitations. By doing this, banks lessen poverty and promote financial independence in rural areas. That should be done through investing in FinTech.

5.2.4 Policy Implications

Sustainable Banking Practices

Every commercial bank should prioritize profitability, sustainability, and stability. Implementing suitable policies that cover what banks need to achieve and what they require to be minimized should be necessary.

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