

# Factors Influencing the Credit Approval Process at Kien Long Bank

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## Abstract

Credit granting is a normal activity of commercial banks in general and Kien Long Bank in particular. Through this activity, the author wants to study the factors affecting credit granting activities of commercial banks in general and Kien Long Bank in particular. The objective of the study is to determine the factors affecting the credit performance of Kien Long Bank. Based on the research database of 30 Kien Long Bank branches with the number of over 263 questionnaires at the branches. With the above research sample, the author chooses the ordinary least squares method (OLS) to test the influence of macro factors and internal factors of banks on credit activities. Through the factors affecting the credit granting process, the author makes some recommendations for Vietnamese commercial banks and Kien Long Bank, including provisioning rate management, controlling credit growth rate, maintaining profitability growth rate, and a reasonable strategy to increase the bank's size in order to ensure safe credit provision.

**Keywords:** Credit granting activities of Kien Long Bank

## 1. Introduction

According to Almajali, Alamro, and Al-Soub (2012), there are various measures of financial activities. One of the main activities that generate income for banks is credit operations. However, credit operations are also one of the biggest risks that banks face (Ekinci & Poyraz, 2021). The significance of credit activities is primarily demonstrated by the substantial

portion of total income they contribute. Additionally, through these activities, commercial banks can cross-sell products and provide a foundation for supporting other operations such as guarantees, international payments, and money transfers. However, the effectiveness of credit operations depends entirely on the underlying risks. These risks not only make bank operations less efficient but also jeopardize the essential liquidity and sensitivity of commercial banks, leading to potential losses and even bankruptcy.

Kien Long Bank holds the leading market share in credit, with controlled non-performing loan ratios. In 2022, the total assets increased by 1.92 times compared to 2016, reaching VND 1.52 quadrillion, making it the largest bank in Vietnam in terms of total assets. The credit growth rate in 2022 reached 8.5% compared to 2021, amounting to VND 1.23 quadrillion, which is 1.64 times higher than in 2016 (Kien Long Bank, 2021). However, in the context of a heavily damaged economy due to the Covid-19 pandemic, Kien Long Bank has reduced its income by over 6,400 billion Vietnamese dong to implement debt restructuring, lower interest rates, and waive interest and fees to support businesses and individuals in overcoming difficulties, recovering, and developing their production and business activities. Kien Long Bank is a commercial bank. Therefore, as technology continues to advance and the global pandemic and social distancing measures persist, the economic landscape and consumer behavior have changed, leading to a more diverse demand for financial services. This situation presents both challenges and opportunities for Kien Long Bank to enhance the effectiveness of its credit operations.

When effective management is implemented, credit activities not only enhance the efficiency and competitiveness of commercial banks in the context of economic integration but also contribute positively to the functioning of the economy through the impact of money supply and demand, thereby stimulating growth and controlling inflation and monetary crises. Therefore, the research aims to identify the factors influencing the credit activities of Kien Long Bank and propose solutions to improve the effectiveness of credit operations at Kien Long Bank and other commercial banks.

## **2. Theoretical Basis**

Authors Nguyen Van Tien (2015), Nguyen Dang Don (2010), Nguyen Minh Kieu (2012) have presented their views on credit quality in credit institutions and the system of credit quality analysis indicators, including qualitative and quantitative indicators. The group of qualitative indicators reflects the contents related to the customer's operating situation and credit management practices of the bank. The group of quantitative indicators includes indicators such as overdue debt, bad debt, profitability from credit activities, capital utilization efficiency, provision for credit risk, credit risk diversification, and capital adequacy. The studies of authors Tran Van Du (2010), Nguyen Thi Thu Dong (2012), Ha Thi Mai Anh (2015), Nguyen Van Tuan (2015), etc. have established a system of credit quality evaluation indicators for credit institutions in the integration process, including quantitative indicators that reflect the financial capacity of credit institutions, the safety level of credit activities, and qualitative indicators that reflect the capacity to manage credit activities and customer satisfaction with credit products provided by the credit institutions. At the same time, these

studies also point out the factors that affect credit quality such as credit policies, credit processes and regulations, organizational work, human resource quality, management capacity, technology equipment, credit information, internal inspection and control, and capital mobilization.

According to Article 4 of Law on Credit Institutions No. 47/2010/QH12 passed by the National Assembly of the Socialist Republic of Vietnam, "Credit granting means an agreement to allow organizations or individuals to use a sum of money or commit to use a sum of money, or agree to allow the use of a sum of money according to the principle of repayment through lending, discounting, financial leasing, payment guarantee, bank guarantee, and other credit granting activities." Credit efficiency is one of the indicators that reflects economic efficiency in the banking sector, specifically the quality of banking credit activities. Credit efficiency is a broad concept that includes many contents, among which the most important and quantifiable is the ratio of overdue debt to total outstanding debt. According to international practices, if the ratio of overdue debt is under 5% and the ratio of difficult-to-recover debt in total overdue debt is low, then it is considered good credit quality, while over 5% is considered problematic debt. Until now, the effectiveness of bank credit is usually considered from three perspectives: the bank, the customers, and the economy. The effectiveness of bank credit from these three perspectives is closely related and cannot be separated.

Performance indicators for evaluating the operation of bank credit include qualitative and quantitative evaluation criteria. Qualitative evaluation criteria include the bank's reputation, the quality of borrowing customers, and the stability of the socio-economic environment. Quantitative evaluation criteria include criteria evaluating credit operation, profitability, capital utilization efficiency (including the growth rate of debt, interest income ratio (%), profit evaluation criteria, capital utilization efficiency evaluation criteria, credit turnover), and evaluation criteria of overdue debt and bad loans of the bank.

Other authors such as Nguyen Thi Nhu Thuy (2015), Nguyen Van Thanh (2015), Nguyen Duc Tu (2012), Le Thi Huyen Dieu (2007), etc. express the issue of credit effectiveness through contents such as RRTD management, bad debt and credit effectiveness management, and improving business operation quality. There are also relevant conferences such as the National Scientific Conference (2017), "Application of Basel 2 in risk management of Vietnamese commercial banks: opportunities, challenges, and implementation roadmap" at the National Economics University. Results from research sent to the conference show that: Most banks have established Basel 2 Provisioning Management Committees; the capital adequacy ratio of the banking system is more than 10% (exceeding the 9% requirement), although it is still lower than that of other countries in the region; commercial banks are making great efforts to further improve their risk management systems, but there are still potential risks in bad debts; there are differences in accounting standards and current disclosure of information compared to international standards. Challenges identified during the implementation of Basel 2 include human resources, increasing equity, building a database system, and the cost of implementing Basel 2 in banks.

### 3. Methodology

#### 3.1 Proposed Research Model

Based on references to previous research by the authors Tran Thi Bao Tram (2007), Ngo Thi Thanh Tra (2010), Le Ba Minh Long (2011), Ngo Thi Huong Lien (2005), Tram Thi Xuan Huong (2004) and the foreign authors Keenton & Morric (1987), Berger & DeYoung (1997), Salas & Saurina (2002). The proposed research model is illustrated in Figure 1.

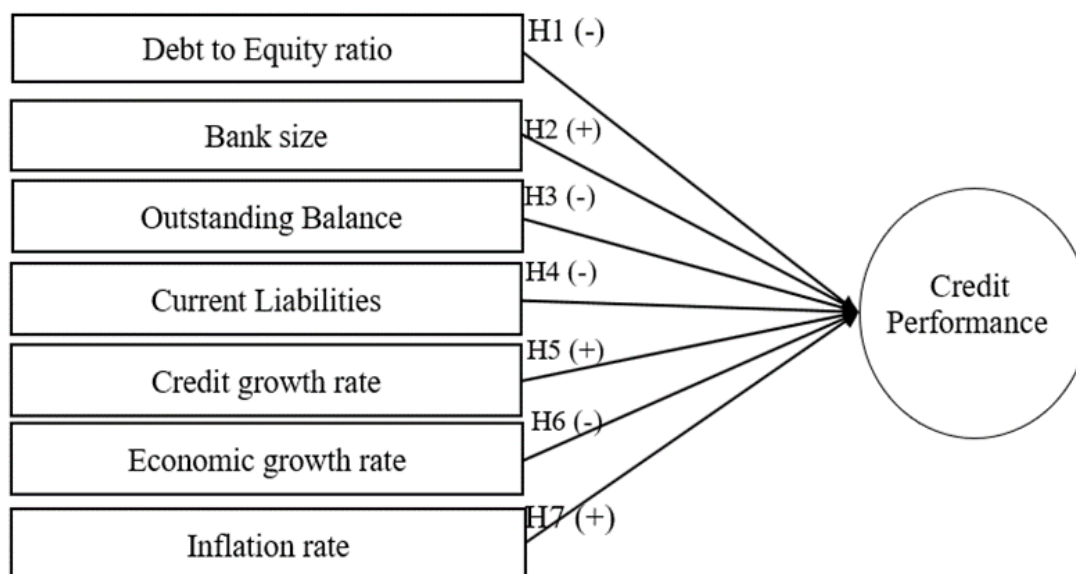


Figure 1. Proposed research model

Some hypotheses are put forward for the proposed model as follows:

Hypothesis H1: Debt-to-equity ratio has a negative effect on the credit performance of the bank.

Hypothesis H2: The bank size has a positive effect on the credit performance of the bank.

Hypothesis H3: Outstanding balance has a positive effect on the credit performance of the bank.

Hypothesis H4: Current liabilities have a negative effect on the credit performance of the bank.

Hypothesis H5: Credit growth rate has a positive effect on the credit performance of the bank.

Hypothesis H6: Economic growth rate has a negative effect on the credit performance of the bank.

Hypothesis H7: Inflation rate has a positive effect on the credit performance of the bank.

Data collection method Secondary data: Collected through financial statements of the Bank's credit performance over the years 2013 - 2022 and collected information from 263 questionnaires from 30 branches of Kien Long Bank.

#### 4. Research Findings

Regression results and tests indicate that the conventional estimation method for Pooled OLS data, is suitable for the research model.

Table 1. Statistics of variables in the model

	<b>NPL</b>	<b>GDP</b>	<b>LGR</b>	<b>LTD</b>	<b>ROE</b>	<b>STL</b>	<b>INF</b>
Average value	1.904	0.061	0.045	0.714	3.758	0.572	0.033
Maximum value	2.740	0.074	0.118	0.783	5.610	0.615	0.050
Minimum value	1.490	0.050	-0.009	0.673	1.250	0.547	0.006
Standard Deviation	<u>0.294</u>	<u>0.008</u>	<u>0.032</u>	<u>0.031</u>	<u>1.238</u>	<u>0.019</u>	<u>0.014</u>

(Source: Data analysis at Kien Long Bank.)

In this study, as mentioned earlier, various tests were conducted to ensure that the data complies with the basic assumptions of the classical linear regression model. Some of the tests performed aimed to examine the deficiencies of the research model used.

To check for the presence of autocorrelation in the residuals, the study carried out the test along with the testing procedure presented in the study by Phạm Tr íCao (2010) to determine whether there is any autocorrelation in the regression model. In this model, the author set the hypotheses as follows:

H0: The model does not exhibit second-order autocorrelation.

H1: The model exhibits second-order autocorrelation.

The results of the test are presented in Table 3.

Table 2. Autocorrelation Test

Statistic F	0.794933	Probability (2,10)	0.4782
Lag R-squared	2.743545	Probability (2)	0.2537

(Source: The author synthesized the data analysis at Kien Long Bank)

Based on the research results, the P-value of 0.4782 indicates that we accept the null hypothesis (H0), which means that the model does not exhibit autocorrelation.

Additionally, the author also performed the Glejser test to check for heteroscedasticity and found evidence of its presence. The results of this test are presented in Table 3.

Table 3. Heteroscedasticity Test

<b>Statistic F</b>	<b>3.278947</b>	<b>Probability (7,12)</b>	<b>0.0344</b>
Lag R-squared	13.13356	Probability (7)	0.0689
Explained R-squared	8.822475	Probability (7)	0.2657

(Source: The author synthesized the data analysis at Kien Long Bank)

The research model was studied using the Ordinary Least Squares (OLS) method to identify the factors affecting the bank's non-performing loans (NPL) during the period 2013 - 2020, based on 7 independent variables, including Return on Equity (ROE), Bank Size (SIZE), Long-term Debt (LTD), Short-term Debt (STL), Credit Growth Rate (LGR), Economic Growth (GDP), and Inflation Rate (INF), with NPL as the dependent variable.

Table 4. Estimation results in the model

Variable	Coefficient	Standard Errors	T-Statistic	P-value
GDP	5.473	5.727	0.956	0.358
LGR	2.517	0.841	2.994	0.011
SIZE	0.009	0.124	0.072	0.944
ROE	-0.242	0.036	-6.694	0.000
LTD	-2.719	1.189	-2.287	0.041
STL	-0.080	1.861	2.192	0.048
INF	5.347	2.835	1.886	0.084
R-squared	0.946	Mean dependent var		1.904
Adjusted R-squared	0.915	S.D. dependent var		0.293
S.E. of regression	0.085	Akaike info criterion		-1.793
Sum squared resid	0.087	Schwarz criterion		-1.395
Estimated Value	25.936	Hannan-Quinn criter		-1.715
F-statistic	30.389	Durbin-Watson stat		1.868
Prob(F-statistic)	0.000001			

(Source: The author synthesized the data analysis at Kien Long Bank)

When conducting the initial regression analysis, the regression results using the Eviews software with the OLS least squares method show that bad debts at the branch are influenced by factors such as credit growth rate, return on equity, credit balance, and short-term debt balance. The estimated results according to the OLS model are expressed by the following formula:

$$\text{NPL} = 1.718 + 2.517 \cdot \text{LGR} - 2.719 \cdot \text{LTD} - 0.242 \cdot \text{ROE} - 0.08 \cdot \text{STL}$$

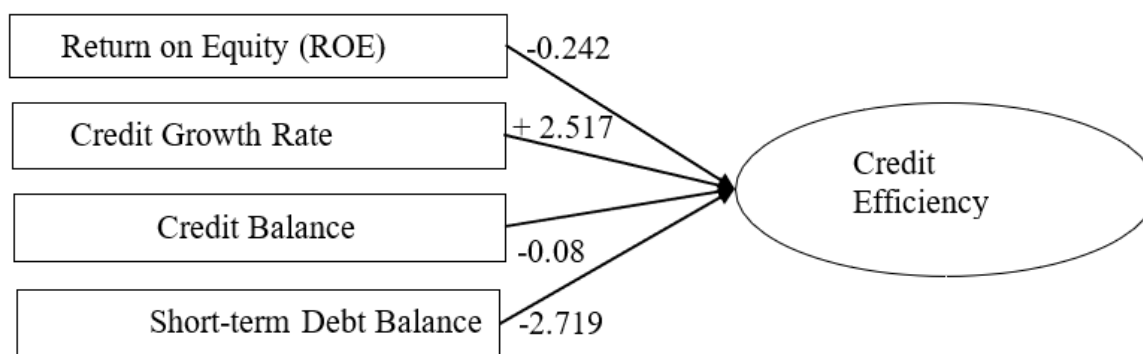


Figure 2. Adjusted research model

(Source: The author synthesized the data analysis at Kien Long Bank)

The model above shows that the variables that have an impact on bad debts at the branch include the ability to generate profits on equity, loan balance, short-term debt balance, and credit growth rate. The factors of the ability to generate profits on equity, short-term debt balance, and credit balance have a negative correlation with bad debts, while the credit growth rate has a positive correlation. Specifically, the ability to generate profits on equity has a statistical significance level of 1%, while the other variables have a significance level of 5%. The research results also show that credit balance, economic growth, and inflation rate do not have an impact on bad debts with a significance level of 5%. Firstly, the test results of the model show that the ability to generate profits on equity (ROE) has an inverse effect on bad debts of the branch with a statistical significance level of 1%, consistent with the "Poor Management" hypothesis of Berger & DeYoung (1997). This result shows that when the bank's profit is improved, it will help the bank minimize bad debts in its loan portfolio. This is similar to the findings of Louzis et al. (2012), Chaibi & Ftiti (2015). This result can be explained as banks with higher profits have less motivation to engage in risky activities because they are less pressured to generate profits (Hu et al., 2004). At the same time, when banks have higher profits, they have the opportunity to select customers with good financial ability and lower risk. Therefore, as the bank's profit increases, the probability that bank managers will participate in risky investment projects will decrease, and the probability that the bank's loans will turn into bad debts will also decrease correspondingly. Conversely, banks with no profit (or ineffective operations) will participate in risky lending activities when managers are under pressure to generate short-term profits. When managers engage in risky activities, it increases the likelihood that loans will turn into bad debts, and thus increases the bank's non-performing loan ratio.

The credit growth rate has a positive impact on non-performing loans with a significance level of 1%, which is consistent with the research of Jimenez & Saurina (2006) and the hypothesis of "Credit cycle". The results also correspond to the reality at the branch level, where competition between bank branches leads to continuously high credit growth rates over the years. This, along with the profit goal and the lowering of credit standards to focus on credit growth, increases the branch's non-performing loans.



Short-term debt in the model has a negative correlation with the non-performing loan ratio. This may be because during the study period, the relationship between this factor and non-performing loans was clearly demonstrated with a significance level of 5%. This research is consistent with the hypothesis of "Loan portfolio diversification" by Rajan & Dhal (2003), which states that the opportunity for a bank to diversify its loan portfolio is negatively correlated with credit quality. This is because as the bank's loan portfolio becomes more diversified, the credit risk of the bank will decrease.

## 5. Conclusion

By using tests and OLS regression models, it is shown that non-performing loans at the branch level are influenced by factors including credit growth rate, return on equity, credit balance, and short-term debt.

Overall, the research results have provided some scientific basis for improving the business efficiency of the bank. Specifically, loan portfolio, debt-to-equity ratio, and short-term debt have a negative impact, while credit growth rate has a positive impact on business efficiency. This provides a foundation for Kien Long Bank to enhance its credit operation efficiency. Based on the research findings on the factors affecting credit operation efficiency, there are four factors that have an impact: loan portfolio, debt-to-equity ratio, short-term debt, and credit growth rate. Several recommendations have been proposed to enhance credit operation efficiency in the future.

Poor management corresponding to the profitability indicator (ROE) can lead to an increase in non-performing loans. Therefore, banks need to pay more attention to the forecasting ability of profitability indicators. When the profitability indicators of the previous year are low, bank managers can make risk-oriented credit decisions to cope with the pressure to increase shareholder profits. On the other hand, banks need to review their entire staff, from leadership to employees, and regularly organize training sessions and competency exams with strict standards to eliminate incompetent employees. Business or customer relationship staff in banks play a vital role in the entire credit granting process, from initial contact to disbursement, loan monitoring, and debt collection. Therefore, enhancing the credit management skills of employees should be emphasized. Excessive credit growth at branches has a positive correlation with non-performing loans, as per the hypothesis of "credit cycle policy." Therefore, branches need to strengthen internal monitoring to prevent the accumulation of non-performing loans in the future by ensuring that the bank avoids excessive lending and maintains appropriate credit granting standards to ensure loan quality. Banks need to develop a long-term strategy for remote prevention of non-performing loans, such as improving credit policies in line with international standards as a prerequisite to ensure the consistent and stringent application of credit policies within the bank.

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