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The Repayment Capacity of MSME on Micro-Credit Risk through impact analysis of DPK, NPL, and DH level; Case from BRI Kunir branch in Blitar

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ABSTRACT

This research examines factors influencing microcredit repayment capacity, focusing on the impacts of DPK (Dalam Pertimbangan Khusus), NPL (Non-Performing Loan), and DH (Daftar Hitam) levels for Kupedes and KUR loans at Bank Rakyat Indonesia's Kunir branch in Blitar. It highlights the role of MSMEs in economic growth and job creation while noting challenges like limited access to finance. Key factors affecting repayment include financial conditions, debt-to-income ratios, and borrower characteristics. Using multinomial logistic regression, the study analyzes the relationship between these variables and repayment performance. Preliminary findings reveal that loan monitoring significantly enhances repayment, reducing default risk by increasing borrower awareness. In contrast, loan size and repayment duration have minimal impact, while collateral negatively affects repayment timeliness, as borrowers may rely on it as a fallback. The study underscores the importance of supervision to maintain repayment stability and suggests that banks could improve oversight, especially for collateralized loans, to minimize bad debts. Insights from this research can aid banks in refining risk management and inform borrowers about factors contributing to repayment challenges. This study focuses on the Kunir area, analyzing data from August 2023 to August 2024, offering a targeted view of microcredit dynamics in Indonesia.

Kata kunci: Microcredit, Repayment Capacity, Loans Performance.

INTRODUCTION

The role of Micro, Small, and Medium Enterprises (MSMEs) is pivotal in driving economic growth, job creation, and fostering innovation globally. Representing approximately 90% of businesses worldwide, MSMEs significantly contribute to poverty alleviation and wealth distribution (Priyanka Pramila & Subhashini, 2023). However, these enterprises face numerous challenges in accessing external financing such as bank loans, credit facilities, and equity investments required to fuel expansion plans and innovation activities including limited access to finance, market competition, regulatory compliance burdens, and a lack of skills. Despite these hurdles, growth opportunities exist through digital transformation, access to new markets, and supportive government policies (Andrianto & Nurjanah, 2023).

In Indonesia, the Kupedes (Kredit Umum Pedesaan) program, offered by Bank Rakyat Indonesia (BRI), is recognized as a key financial solution tailored to the needs of MSMEs. This program aims to enhance the welfare of borrowers by providing capital to develop profitable micro-enterprises (Mahdityari, 2014). Additionally, the Kredit Usaha Rakyat (KUR) program supports small businesses and stimulates the Indonesian economy (Widayanti et al., 2022). Research indicates that KUR has a positive impact on MSME revenues, particularly in the culinary sector, where entrepreneurs report increased income after utilizing these loans. Nonetheless, challenges such as borrower awareness and competition from alternative products persist (Aristianti & Nurulrahmatiah, 2021).

The ability of borrowers to repay microcredit is influenced by various financial factors, including consumer expenditures and the overall financial health of the debtor. High Non-Performing Loan (NPL) rates can adversely affect a bank's financial stability, profitability, and risk of bankruptcy. Understanding the determinants of repayment capacity is essential for managing credit risk effectively (Umapathi et al., 2022).

Motivation of this study to understand factors influencing microcredit lending by Micro, Small, and Medium Enterprises (UMKM) in the rural area, particularly in Kunir, Blitar. UMKM plays a crucial role in reducing economic hardship and fostering job creation in Indonesia, but they often face challenges in accessing funds and maintaining financial health (Simkus, 2022). The research is based on the Kupedes and KUR program of Bank Rakyat Indonesia, providing a more specific understanding of microcredit lending dynamics. It also aims to identify non-financial factors, such as loan management, which are often overlooked but have significant potential to improve lending. The study also analyzes variables like DPK, NPL, and DH to contribute to banks in evaluating effective credit lending and reducing credit risk to stabilize UMKM financial stability (Prihatina, 2022).

This study identifies several gaps in the literature related to microcredit, especially in the local Indonesian context. Firstly, many studies focus on the national scale or large urban areas, while this research provides a new perspective by focusing on the Kunir area in Blitar, which has different socioeconomic characteristics (PURNAMA & SAGITA, 2024). Kunir area is different than any other suburbs area in Blitar, East Java because of its characteristics such as horse racing track (the only one in a suburban area and the place of a well-known spiritual teacher in Blitar Gus Iqdam when he preached a lot people came to Kunir area to watch him. This could lift socioeconomics in the Kunir area. This research seeks to understand how the local context affects microcredit repayment ability, which is still under-explored. Second, there is a lack of research that specifically examines the influence of intensive supervision and collateral on loan repayment behaviour (Hartanto & Wulandari, 2023). The findings in this study show that supervision has a positive impact on repayment ability, while collateral hurts the timeliness of payments (Koesworo et al., 2015). This gap is important to close as it has not been widely discussed in the literature how non-financial aspects, such as supervision, and structural factors, such as collateral, affect the behavior of micro borrowers. Moreover, this study offers a holistic perspective by integrating the variables of DPK (Under Special Consideration), NPL (Non-Performing Loan), and DH (Blacklist), which are generally researched separately, to understand their joint impact on microcredit risk. Lastly, this study found that loan size and duration do not have a significant effect on repayment in the context of the study area, differing from the results of previous studies that often show a significant effect of these two variables. This finding underscores the importance of further research on non-financial factors that may play a greater role in microcredit repayment performance in regions with specific characteristics.

This research aims to analyze the factors influencing the repayment capacity of microcredit borrowers, specifically focusing on how these factors affect the levels of DPK (Dalam Pertimbangan Khusus), NPL (Non-Performing Loan), and DH (Daftar Hitam - blacklist) in the context of Kupedes and KUR loans at BRI's Kunir branch in Blitar. By addressing these issues, the research seeks to provide valuable insights for academic purposes, banking institutions, and borrowers themselves, ultimately contributing to a more robust understanding of microcredit dynamics in Indonesia.

METHOD

The research relies on secondary data obtained from Bank Rakyat Indonesia (BRI) Unit Kunir, Blitar Branch, from 2023 to 2024. The dataset includes information on customer credit performance, particularly focusing on DPK, NPL, and DH categories.

This study aims to analyse the factors that affect the ability of debtors to repay microcredit at Bank BRI, which then has an impact on the level of DPK, NPL, and DH on Kupedes and KUR loans at Bank BRI Kunir unit, Blitar branch. Previously, validation of debtors was conducted to identify the causes of their inability to repay loans. The analysis of the determinants of the debtors' ability to repay microcredit was conducted after the validation process. Debtors listed in DPK, NPL, and DH were then analysed to determine the appropriate preventive measures to assess their ability to repay loans.

Multiple linear regression analysis is used to determine how several independent variables affect the dependent variable. In this context, the independent variables could be the determinants of microcredit repayment ability, while the dependent variables are the level of deposits, NPL and DH.

$$\text{Tingkat DPK} = \beta_0 + \beta_1 \text{Faktor}_1 + \beta_2 \text{Faktor}_2 + \cdots + \beta_k \text{Faktor}_k + \varepsilon$$
$$\text{NPL} = \beta_0 + \beta_1 \text{Faktor}_1 + \beta_2 \text{Faktor}_2 + \cdots + \beta_k \text{Faktor}_k + \varepsilon$$
$$\text{DH} = \beta_0 + \beta_1 \text{Faktor}_1 + \beta_2 \text{Faktor}_2 + \cdots + \beta_k \text{Faktor}_k + \varepsilon$$

Description:
Factor: independent variables that affect credit repayment ability
β_0: Intercept
β_1, β_2....: Regression Coefficient
ε: error item

Hypotheses 1

Loan size can affect MSME loan repayment performance both positively and negatively. Higher loan amounts may increase the burden on borrowers to fulfill large principal and interest obligations, while increased loans allow borrowers to operate fully and productively so as to improve loan repayment performance. The first hypothesis is supported by (Melese and Asfaw, 2019; Salifu et al., 2018) who found that a large loan size will make it difficult for borrowers if the business does not generate the expected cash flow.

H1: Higher loan amounts positively affect repayment capacity

Hypotheses 2

A shorter repayment period is expected to negatively impact loan repayment performance and vice versa. This hypothesis is confirmed by (Alemu, 2018) who revealed that the inconvenience of loan repayment periods has a negative effect on MSME loan repayment.

H2: **Shorter loan repayment periods negatively affect repayment performance**

Hypotheses 3

Continuous follow-ups and supervisory visits to evaluate loan utilization and repayments make borrowers use their loans efficiently and remind them of their obligations. Therefore, this is expected to have a positive influence on the loan repayment performance of MSMEs in the study area. This hypothesis is supported by (Agbeko et al., 2017) who found that intensive supervision can improve loan repayment rates.

H3: **Regular monitoring of loan usage positively impacts loan repayment performance**

Hypotheses 4

The existence of reliable collateral is expected to improve MSME loan repayment performance, as debtors pay attention to loan utilization and repayment to protect the loss of their collateral assets. This hypothesis is confirmed by (Abuye and Shiferaw, 2019) who found that collateral is a key requirement to guarantee debtors' loan repayment practices.

H4: **Reliable collateral security positively influences repayment performance**

The study adopts a quantitative approach, focusing on the analysis of factors affecting the repayment capacity of microcredit borrowers. The research is structured to address specific objectives, including evaluating the financial performance of micro, small, and medium enterprises (MSMEs) and their impact on repayment capacity.

One significant factor affecting loan repayment is the borrower's demographic and economic characteristics. Kassegn and Endris reported that clients' monitoring significantly improves repayment rates, regardless of educational background or business experience, suggesting that borrower engagement is crucial for enhancing repayment performance (Kassegn & Endris, 2021). This is further supported by Magali's findings, which indicate that demographic factors and economic activities significantly influence loan repayment, particularly during challenging periods like the COVID-19 pandemic (Magali, 2023). Technological advancements, particularly in machine learning, are increasingly being utilized to predict loan repayment outcomes. For example, models developed by Alsaleem and Hasoon demonstrated that machine learning algorithms could effectively predict loan risks by analyzing repayment patterns (Alsaleem & Hasoon, 2020). The research measures loan repayment using descriptive statistics, financial ratios, and a logit regression model to analyze the loan repayment performance of MSMEs

RESULTS AND DISCUSSION

Table 1
Multiple linear regression analysis

Dependent Variable: Loan_Repayment_Performance_Y
Method: Least Squares
Date: 09/30/24 Time: 19:59
Sample: 1 13
Included Observations: 13

Variable	Coefficient	Std. Error	T-Statistic	Prob.
C	0.969036	0.008023	120.7867	0.0000
Loan_Size_X1	3.74e-14	1.21e-13	0.308955	0.7652
Shorter_Repayment_X2	-5.27e-07	2.38e-06	-0.221198	0.8305
Loan_Supervision	1.22e-11	3.16e-14	386.6307	0.0000

_Monitoring_X3				
Collateral_Security_X4	-1.19e-11	1.33e-13	-88.97806	0.0000

R-Squared	0.999953	Mean Dependent Var	0.959424
Adjusted R-Squared	0.999930	S.D. Dependent Var	0.029713
S.E. Of Regression	0.000249	Akaike Info Criterion	-13.47247
Sum Squared Resid	4.97e-07	Schwarz Criterion	-13.25519
Log Likelihood	92.57108	Hannan-Quinn Criter.	-13.51714
F-Statistic	42630.41	Durbin-Watson stat	1.862763
Prob(F-Statistic)	0.000000		

Analysis

Based on the regression test results with the dependent variable Loan Repayment Performance, it was found that overall the model used has a very high level of fit with an R-squared value of 0.999953. This indicates that the independent variables in this model are able to explain about 99.99% of the variation that occurs in loan repayment performance.

Loan Size

Based on the regression coefficients obtained, the loan size variable has a very small coefficient of 3.74E-14 and is not statistically significant with a p-value of 0.7652. This result indicates that loan size does not have a significant influence on loan repayment performance in this study. This may be due to the inability of micro enterprises to utilise large loans effectively or cash flow conditions that are not as expected, as also revealed in previous studies by Melese and Asfaw (2019) and Salifu et al. (2018). However, the results of this study do not support hypothesis H1 that loan size can positively influence loan repayment performance

Shorter Repayment Period

This variable has a negative coefficient of -5.27E-07, but is not statistically significant with a p-value of 0.8305. This result shows that a shorter repayment period has no significant effect on loan repayment performance. Although the initial hypothesis (H2) states that a shorter repayment period will hurt repayment performance, the regression results do not support this hypothesis. This may be due to other factors such as loan restructuring programs or technical assistance that help borrowers manage their repayments.

Loan Supervision and Monitoring

This variable shows a highly significant effect on loan repayment performance with a coefficient of 1.22E-11 and a p-value of 0.0000. This result supports hypothesis H3 which states that loan supervision and monitoring has a positive effect on loan repayment performance. Close supervision and regular visits to evaluate loan utilization help debtors stay focused and use loans efficiently, as stated by Agbeko et al. (2017). Thus, intensive and regular follow-ups play an important role in ensuring better loan repayment performance.

Collateral Security

This variable has a significant negative effect on loan repayment performance with a coefficient of -1.19E-11 and a p-value of 0.0000. This result contradicts hypothesis H4 which states that collateral security is expected to improve loan repayment performance. The decline in loan repayment performance associated with collateral may be due to the fact that most borrowers consider collateral as a last resort and tend to neglect their obligations, hence they are not motivated to keep loan repayments current. This research provides an insight that, although collateral is often used as a tool to guarantee repayment, in some cases, the presence of collateral can actually reduce the motivation of debtors to repay loans on time.

Overall, the results of this analysis support some of the research hypotheses, particularly regarding the importance of loan supervision and monitoring in improving loan repayment performance. However, other variables such as loan size and repayment period did not have a significant effect in this context, while collateral security showed an effect contrary to expectations. This study implies that non-financial factors, such as loan monitoring, may be more important than traditional factors such as loan size and collateral in ensuring successful loan repayment in the micro sector.

CONCLUSION

The determinants affecting microcredit repayment performance at Bank BRI's Kunir branch in Blitar are thoroughly examined in this study. The findings highlight the importance of non-financial elements in improving repayment ability, such as loan supervision and monitoring. Extensive loan monitoring demonstrated a significant beneficial impact, underscoring its significance in maintaining effective credit utilisation and holding borrowers accountable. However, conventional elements like loan amount and payback period had no discernible impact, suggesting that the dynamics of microcredit repayment may vary based on the local environment and particular borrower traits.

The results indicate that to effectively manage microcredit risks, customized strategies are needed. Even if financial considerations are still important, non-financial tactics like raising borrower awareness and bolstering oversight are essential for achieving better repayment results. These revelations add to our understanding of the dynamics of microcredit in Indonesia and have important ramifications for banks, especially in rural regions like Kunir. For future research to give an improved understanding of microcredit repayment patterns, future research should include additional non-financial elements such as borrower education levels, company kinds, and external economic effects. Comparative insights about repayment patterns across regions may also be obtained by broadening the study's geographic scope to encompass a variety of rural and urban areas. Incorporating qualitative techniques, including borrower interviews, may also help researchers better understand the factors impacting loan repayment, including motives and difficulties. To use technology to improve loan management, more research should be done on the function of digital tools and machine learning for tracking and forecasting payback patterns.

For the company (BRI Kunir branch in Blitar) banks should allocate resources for regular borrower involvement, such as visits and counseling sessions, to improve loan supervision procedures. This will guarantee that borrowers make efficient use of their loans and continue to be conscious of their responsibilities. Banks should think about other tactics, such as rewarding early repayments or enforcing more stringent borrower screening procedures, given the detrimental effects of collateral dependence on timely repayment. To improve repayment capability, the organization might also create training courses for borrowers that emphasize business management and financial literacy. Finally, non-performing loans may be greatly decreased by using data-driven technologies to detect high-risk borrowers and tailor intervention tactics.

To strengthen their loan management abilities, borrowers are urged to actively interact with bank staff and take part in financial literacy initiatives. Repayment ability can be improved and an excessive reliance on collateral can be avoided by making sure that borrowed money is well planned for and used for worthwhile endeavors. Additionally, when confronting difficulties with payments, keeping lines of communication open with the bank might assist borrowers in seeking help or exploring restructuring possibilities. In addition to preventing defaults, improving budgeting techniques and making loan repayments a priority would raise credit scores and create prospects for future financial aid on better terms.

BIBLIOGRAPHY

Andrianto, T., & Nurjanah, Y. (2023). Analisis Pengaruh Usia, Jumlah Pinjaman, Pengalaman Usaha dan Omzet Usaha terhadap Kelancaran Angsuran Pembiayaan Ultra Mikro (UMi). *Jurnal Ilmiah Akuntansi Kesatuan*, *11*(2), 271–280.

Aristianti, A., & Nurulrahmatiah, N. (2021). Analisis Non Performing Loan (NPL) Pada Bank BRI Tbk. *Jurnal Disrupsi Bisnis*, *4*(5), 463.

Hartanto, R. V., & Wulandari, P. (2023). Analisis Faktor Yang Menentukan Kemampuan Pembayaran Kredit Mikro Dari Sisi Debitur Dan Usaha Debitur (Studi Kasus Kredit Usaha Rakyat). *Cakrawala Repositori IMWI*, *6*(5), 1717–1736.

Koesworo, Y., Muljani, N., & Ellitan, L. (2015). Peran Lembaga Keuangan Mikro Dan Manajemen Resiko Kredit Dalam Menjaga Kelangsungan Hidup UMKM Di Surabaya Dan Sekitarnya: Perspektif Lembaga Keuangan Mikro. *Proceeding of International Conference Sustainable Competitive Advantage*, *5*(1).

Mahdityari, N. (2014). *Evaluasi Pengawasan Kredit Umum Pedesaan (Kupedes) Dalam USAha Mencegah Dan Mengatasi Terjadinya Kredit Macet (Studi Pada PT. Bank Rakyat Indonesia (Persero) Tbk. Kantor Cabang Jombang-Unit Veteran)*. Brawijaya University.

Prihatina, R. (2022). Mengenal Kolektibilitas (Kol) Kredit Perbankan Kaitannya Dengan dengan Undang-Undang No 4 Tahun 1996 (UUHT). *Diambil Kembali Dari Www. Djkn. Kemenkeu. Go. Id: Https://Www. Djkn. Kemenkeu. Go. Id/Kpknl-Pekalongan/Baca-Artikel/14713/Mengenal-Kolektibilitas-Kol-Kredit-Perbankan-Kaitannya-Dengan-Dengan-Undang-Undang-No-4-Tahun-1996-UUHT. Html#:~: Text= Berdasarkan% 20ketentuan% 20Bank% 20Indonesia% 2C% 20kolektibilitas, Lancar*.

Priyanka Pramila, R., & Subhashini, R. (2023). Automated skin lesion detection and classification using fused deep convolutional neural network on dermoscopic images. *Computational Intelligence*, *39*(6), 1073–1087.

PURNAMA, L., & SAGITA, N. (2024). *Pengaruh Revenue Diversification Terhadap Non Performing Loans (Npl) Dan Non Performing Financing (Npf) Pada Perusahaan Perbankan Konvensional Dan Perbankan Syariah Yang Terdaftar Di Burs Efek Indonesia Selama 5 Tahun Terakhir (2018-2022)*. Universitas Katolik Soegijapranata.

Simkus, J. (2022). Convenience sampling: Definition, method and examples. *Retrieved Oktober*, *6*, 2022.

Umapathi, R., Rani, G. M., Kim, E., Park, S., Cho, Y., & Huh, Y. S. (2022). Sowing kernels for food safety: Importance of rapid on-site detction of pesticide residues in agricultural foods. *Food Frontiers*, *3*(4), 666–676.