THE EFFECT OF INTEREST RATES AND NON-PERFORMING LOANS ON THE DISTRIBUTION OF MICRO, SMALL AND MEDIUM ENTERPRISES (MSMEs)

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ABSTRACT

This study aims to determine the influence of interest rates and Non-Performing Loans (NPL) on the disbursement of Micro, Small, and Medium Enterprises (MSMEs) loans. The method used is Systematic Literature Review (SLR) with data obtained from Google Scholar in the period 2015–2025, using 10 articles that have passed the screening process.

The results of the study show that the influence of interest rates on MSME loan disbursement tends to fluctuate from time to time. However, from the period 2018 to 2023, the influence of interest rates has been positive and significant. Meanwhile, NPLs showed a positive influence on MSME credit disbursement, although not significant in the initial period (2015–2017). In the 2018–2022 period, the influence of NPLs became positive and significant, indicating an increase in credit disbursement in line with the improvement in the quality of financing in the MSME sector.

Keywords:

Interest rates; Non-Performing Loan (NPL); Credit distribution; Micro, Small and Medium Enterprises (MSMEs); Systematic Literature Review (SLR)

INTRODUCTION

Based on data from the Financial Services Authority (OJK), the number of Micro, Small, and Medium Enterprises (MSMEs) in Indonesia by 2025 will reach around 65.5 million business units, which contribute 61.9% to the Gross Domestic Product (GDP) and absorb more than 119 million workers, or around 97% of the total national workforce. Data from the Coordinating Ministry for Economic Affairs (2024) also shows that MSMEs play a role as the backbone of the national economy, with a contribution of more than 60% to GDP and the number of business units that have exceeded 64 million. (Financial Services Authority (OJK), 2025).

MSMEs have a strategic role in the Indonesian economy, not only as a driver of the people's economy, but also as a provider of jobs and a support for national economic resilience. However, the MSME sector still faces various challenges in the business development process, especially related to limited access to financing from formal financial institutions. One of the main factors that affect the distribution of credit to the MSME sector is the interest rate. The interest rate is the price that the debtor must pay for the loan received from the financial institution. When interest rates increase, loan costs become more expensive, thus reducing the interest of MSME actors to apply for credit. Conversely, a reduction in interest rates could encourage an increase in credit demand as the burden of interest payments becomes lighter. Based on Bank Indonesia (BI) data, the benchmark interest rate (BI 7-Day Reverse Repo Rate) has fluctuated in recent years to maintain monetary stability and control inflation. This change in interest rates directly affects the bank's ability to channel credit and financing requests by MSMEs.

In addition to the interest rate factor, Non-Performing Loans (NPLs) or nonperforming loans also play an important role in determining the level of credit disbursement. NPLs reflect the amount of credit that is not paid on time by the debtor, both interest and principal. According to the provisions of the OJK, a credit is categorized as non-performing if there is a delay in payment of more than 90 days, or if the credit quality is classified as less smooth, doubtful, or stuck.

A high NPL rate indicates increased credit risk and a decline in the quality of bank assets, so banks tend to be more cautious in granting new loans. This has the potential to reduce the amount of credit disbursed to productive sectors such as MSMEs. On the other hand, low NPLs indicate good credit quality and encourage banks to increase financing disbursements. Based on OJK regulations, the safe limit of the banking NPL ratio in Indonesia is a maximum of 5%. Keeping the NPL ratio below this limit is important so that the bank's intermediation function can run optimally and support economic growth and empowerment of the MSME sector.

Thus, interest rates and NPL rates are two main variables that are interrelated and affect the distribution of MSME loans. Changes in these two factors can reflect the stability of the financial system, banking behavior in distributing credit, and the ability of MSMEs to access financing.

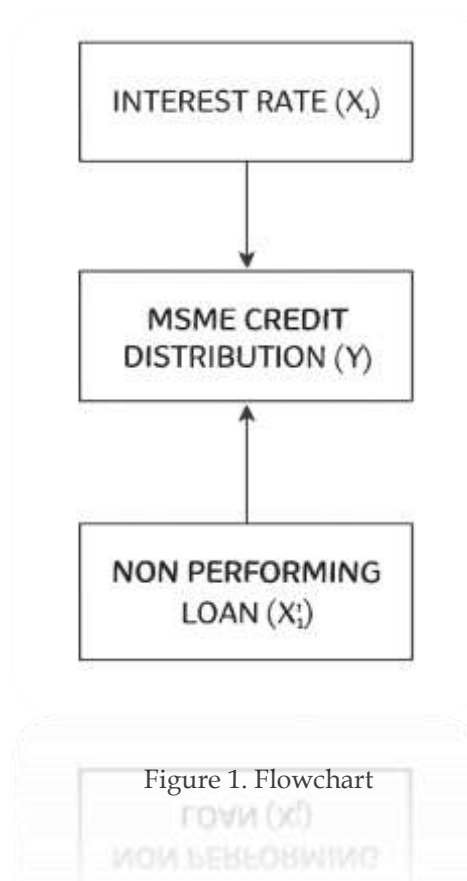**THEORETICAL OVERVIEW Interest Rate Theory (Keynes, 1936)**
Explains that interest rates affect credit demand. When interest rates rise, borrowing costs increase so that credit demand decreases, and vice versa. (*John Maynard Keynes (5*, 1936).

Credit Risk Theory (Greuning & Bratanovic, 2009)

Stating that the high Non-Performing Loans (NPL) reflect the increasing risk of default. The higher the NPL, the more cautious the bank will be in disbursing new loans. (Prajitno, 2009).

Banking Intermediation Theory (Gurley & Shaw, 1960)

The bank functions as an intermediary between the party that has excess funds and the party that needs the funds. However, the ability to interchange is influenced by internal factors such as interest rates and NPLs that can reduce credit disbursement.(Rachmawati et al., 2025).

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┌─────────────────────┐
│ INTEREST RATE (X₁)  │
└─────────────────────┘
          │
          ▼
┌─────────────────────┐
│   MSME CREDIT       │
│ DISTRIBUTION (Y)    │
└─────────────────────┘
          ▲
          │
┌─────────────────────┐
│  NON PERFORMING     │
│   LOAN (X₁')        │
└─────────────────────┘
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Figure 1. Flowchart

Research Methodology

This study applies the Systematic Literature Review (SLR) approach to obtain a comprehensive picture of the relationship between interest rates, Non-Performing Loans (NPLs), and credit disbursement in the MSME sector. The SLR approach is carried out by following three main stages as explained by Kitchenham (2007), namely the planning stage, the implementation of the review, and the reporting of results.

The type of data used is secondary data sourced from scientific articles, national and international journals, as well as research results that are relevant to the study topic.

The literature search process was carried out using the Publish or Perish (POP) application with the Google Scholar database, covering the publication period of 2015–2025.

From the initial search results, 200 articles were obtained that discussed related topics. After a selection based on the suitability of the topic and the year of publication, the number of articles was reduced to 108. Furthermore, through an advanced screening stage based on the relevance to the research variables and the completeness of the data, the 10 most representative and up-to-date articles were selected to be used as the main source of analysis.

Table 1 : Name of Article, Journal, Sample, Analysis Technique and Variables

No.	Name, Journal and Year of Research	Research Sample	Data Analysis	Research Variables
1	Detria Fauziyah Pramesti and Sugeng Hadi Utomo (2022) Journal of Management (Fauziyah et al., 2022)	MSME entrepreneurs in Malang City who have taken credit with a total of 100 respondents.	Berganda line liner regresi analysis	Interest
2	Dessy Handa Sari, Rabiatul Annisa and Totok Ismawanto (2021) Journal of Management and Business Studies (Handa Sari et al., n.d.)	Commercial banks with conventional principles registered in Indonesia based on OJK data from 2011 - 2019.	Berganda line liner regresi analysis	Interest
3	Muhammad Zulkarnain, Mukaramah, Cindy Yolanda, T.M Iqbal Chaira and Chintya Winda Natalia Butar - Butar (2024) Journal of Economic and Strategy (Economics of Business Management, Prima et al., n.d.)	Data were obtained from the Central Statistics Agency (BPS) and from Bank Indonesia from 2006-2020.	Berganda line liner regresi analysis	Interest
4	Maya Puspitasari and Musaroh (2018) Journal of Management Science (Puspitasari, 2018)	Quarterly Financial Statements of Conventional Commercial Banks in Indonesia for the Period 2015-2016	Berganda line liner regresi analysis	Non Performing Loan (NPL)

No.	Name, Journal and Year of Research	Research Sample	Data Analysis	Research Variables
5	Aris Munandar and M. Rimawan (2019) Journal of Caltex Riau Polytechnic (Munandar & Rimawan, 2019)	The research sample is data from the last 10 years (2009–2018) from the 20year-old population (1999–2018), selected by purposive sampling because the data is complete and available at BPS NTB and BI NTB.	Berganda line liner regresi analysis	Interest
6	Felicya Celine Malimpo, Sri Murni, and Joy Elly Tulung (2023) LPPM Journal in the Field of EcoSosBudKum (Economic, Social, Cultural, and Law) (Céline Malimpo et al., n.d.)	This study used 68 national private commercial banks (2018–2021) as the population, and with purposive sampling 29 banks that met the criteria as a sample were obtained.	Panel data regression analysis	Interest
7	OswaldusAlbertus Rhada (2023) Edunomika (Albertus Rhada, 2023)	Ende-Flores-NTT interest credit cooperative in 2018-2022	Berganda line liner regresi analysis	Interest Rates and Non-Performing Loans (NPLs)
8	Ni Komang Rina Pradnyawati and Ni Luh Gede Erni Sulindawati (2023) JIMAT (Scientific Journal of Accounting Students) (Komang et al., 2023)	Data was obtained through questionnaires, literature studies, and documentation on 320 MSME actors in Mendoyo District who were selected by purposive sampling.	Berganda line liner regresi analysis	Interest
9	Bagus Panuntun and Sutrisno (2018) Journal of Accounting and Dynamics	The study used 40 IDX conventional banks with purposive sampling and the period 2015–2016.	Berganda line liner regresi analysis	Non Performing Loan (NPL)
10	Steven, Felicia Celesta, Silvia and Yeni Ariesa (2022) Journal of Excellent Management Business Economics (Economics of Business Management, Prima et al., n.d.)	Site Data www.bi.go.id, www.idx.co.id, www.sumberdata.kontan.co.id, www.bps.go.id 2011-2019	Berganda line liner regresi analysis	Interest

Result

Table 2 : Results of Previous Research

No.	Name, Journal and Year of Research	Research Results
1	Detria Fauziyah Pramesti and Sugeng Hadi Utomo (2022) Journal of Management	The results of the analysis show that interest rates have a positive and significant effect on the decision to take MSME loans. The regression coefficient of 0.2046854 with a t-value of 3.64 > 1.98 and a significance of 0.000 < 0.05 means that any increase in interest rates of one percent will increase the decision to take credit by 0.2046854 units. This shows that even though interest rates are rising, MSME actors still tend to take credit due to the need for business capital.
2	Dessy Handa Sari, Rabiatul Annisa and Totok Ismawanto (2021) Journal of Management and Business Studies	From the results of the multiple linear regression test, it shows that the coefficient of the BI 7-day Rapo rate < from 0.05, H0 is rejected and H1 is accepted, so it can be concluded that the BI 7-day Repo Rate partially has a significant positive impact on MSME Credit Distribution, although in theory the increase in interest rates will affect public interest in applying for credit, but it does not completely reduce the desire of the public and corporations to borrow because of the existence of need for these additional funds.
3	Muhammad Zulkarnain, Mukaramah, Cindy Yolanda, T.M Iqbal Chaira and Chintya Winda Natalia Butar - Butar (2024) Journal of Economic and Strategy	The effect of interest rates on MSME loans is negative and insignificant, which is known from the results of the regression equation with a coefficient value of -5.276X1 and a significance value of sig > α 5% (0.737 > 0.05). This is because interest rates that are too large will reduce

No.	Name, Journal and Year of Research	Research Results
		the interest of MSME actors in Indonesia to get capital from MSME Loans.
4	Maya Puspitasari and Musaroh (2018) Journal of Management Science	The results of the regression test showed that the Non-Performing Loan (NPL) coefficient was 0.096 with a t-count of 1.659 and a significance of 0.100 > 0.05, so that NPL had no significant effect on MSME credit distribution, and the fourth hypothesis was rejected.
5	Aris Munandar and M. Rimawan (2019) Journal of Caltex Riau Polytechnic	The interest rate coefficient of -0.052 indicates that a 1% increase in interest rates lowers working capital loans by 0.052, and vice versa. However, the t-test (-0.422) with a significance of 0.688 (>0.05) shows the effect of negative but not significant interest rates on the distribution of MSME working capital loans in NTB, possibly because interest rates during 2008-2018 were still low so that the impact on MSME credit interest was not large.
6	Felicya Celine Malimpo, Sri Murni, and Joy Elly Tulung (2023) LPPM Journal in the Field of EcoSosBudKum (Economic, Social, Cultural, and Law)	The interest rate regression coefficient (VARX3) = -0.103 indicates that an increase of 1 unit of interest rate decreases credit disbursement by 0.103, assuming other variables are constant. A probability value of 0.027 < 0.05 indicates a partially significant interest rate effect on credit disbursement, and the F test ($F(3.84) = 66.26$, Prob > F = 0.0000) shows a simultaneously significant model.
7	OswaldusAlbertus Rhada (2023) Edunomika	The results of the study show that interest rates have a negative but insignificant effect on credit disbursement, while Non-Performing Loans (NPLs) have a positive but small effect. This means that changes in interest rates do not affect credit

No.	Name, Journal and Year of Research	Research Results
		disbursement much, while NPLs still have an influence even though they are weak.
8	Ni Komang Rina Pradnyawati and Ni Luh Gede Erni Sulindawati (2023) JIMAT (Scientific Journal of Accounting Students)	Interest rates have a positive and significant effect on the credit decisions of MSME actors in Mendoyo District. The lower the interest rate, the higher the interest of MSME actors to take credit.
9	Bagus Panuntun and Sutrisno (2018) Journal of Accounting and Dynamics (Stuart & Sutrisno, 2019)	The results of the study showed that NPLs had a significant and negative effect on credit disbursement in 40 commercial banks in Indonesia.
10	Steven, Felicia Celesta, Silvia and Yeni Ariesa (2022) Journal of Management Business Economics	The results of the analysis show that the BI Rate has a positive but not significant effect on MSME credit financing

Discussion

Interest Rates

In the period 2006–2019, most studies found that the effect of interest rates on MSME credit disbursement was negative or insignificant (e.g., studies 2006–2020 TS, 2009–2018 TS, and 2011–2019 TS), although some studies reported a significant positive effect (2011–2019 S). This shows that even though interest rates have increased, MSMEs still access credit due to urgent capital needs. This variation in results may be due to the location of the study, the characteristics of the sample, or the type of business sector being studied.

During the 2018–2022 period, some studies reported significant negative influences (2018–2021 S), while others remained insignificant (2018–2022 TS), indicating that MSMEs are starting to be more sensitive to changes in interest rates, which are influenced by liquidity conditions, inflation rates, and differences in government assistance policies between regions.

In the 2022–2023 period, research showed a significant positive influence (2022 Q, 2023 Q), indicating that MSMEs continue to access credit even though interest rates have increased. This phenomenon is likely related to the high need for capital for expansion

or operations, the support of financial institutions, and post-pandemic economic stabilization, so that borrowing costs are relatively not the main obstacles.

Overall, although most early studies showed negative or insignificant influences, contrasting studies usually come from different periods, locations, and characteristics of MSMEs. Meanwhile, recent research shows a positive trend, which is likely influenced by external factors such as government stimulus and ease of access to financing.

Non-Performing Loans (NPLs)

In the period 2006–2019, most studies reported that the effect of interest rates on MSME credit disbursement was negative or insignificant (e.g., 2006–2020 TS, 2009–2018 TS, and 2011–2019 TS), although some studies found a significant positive effect (2011–2019 S). This shows that MSMEs continue to apply for credit even though interest rates are increasing, due to urgent capital needs. The differences in findings between studies may be influenced by the location of the study, the characteristics of the sample, and the type of business sector.

In the period 2018–2022, several studies found a significant negative influence of interest rates (2018–2021 S), while other studies remained insignificant (2018–2022 TS), suggesting that MSMEs are starting to be more sensitive to interest rate fluctuations, which are influenced by liquidity conditions, inflation rates, and differences in government assistance policies.

Meanwhile, NPLs initially had a positive but insignificant influence in the 2015–2017 period, indicating that despite the presence of non-performing loans, banks still disbursed loans to MSMEs. In the 2018–2022 period, the influence of NPLs was positive and significant, reflecting an increase in credit disbursement in line with improving financing quality, risk mitigation strategies, and increasing bank confidence in MSMEs.

In the 2022–2023 period, interest rates showed a significant positive influence, indicating that MSMEs continued to take credit even though interest rates increased, driven by high capital needs, financial institution support, and post-pandemic economic stabilization. Meanwhile, the influence of NPLs in the same period varied; some studies showed minor or insignificant influences, while other studies found significant negative influences, depending on the bank's internal policies, risk management, and the characteristics of MSMEs.

Overall, although initial research mostly shows negative or insignificant influences, recent studies show positive trends for both variables, which are likely influenced by

external factors such as government stimulus, ease of access to financing, and improved quality of MSME financing**.**

Conclusion

The results of the literature review show that the influence of interest rates and NonPerforming Loans (NPLs) on MSME credit disbursement varies based on the period, location, and characteristics of the sample.

For interest rates, in the initial period (2006–2019) the effect tended to be negative or insignificant, although some studies found significant positives, which indicates that MSMEs continue to apply for credit due to urgent capital needs. In the 2018–2022 period, several studies reported a significant negative influence, indicating that MSMEs are starting to be more sensitive to interest rate fluctuations, while in the 2022–2023 period, the influence became significantly positive, driven by high capital needs, financial institution support, and post-pandemic economic stabilization.

For NPLs, the initial impact (2015–2017) was positive but not significant, indicating that banks continued to disburse loans despite the presence of non-performing loans. In the 2018–2022 period, the influence of NPLs became positive and significant, in line with improving the quality of financing and increasing bank confidence in MSMEs. In the 2022–2023 period, the influence of NPLs varied; some studies show minor or insignificant, while others are negatively significant, depending on the bank's internal policies, risk management, and characteristics of MSMEs.

Overall, although early research has shown a lot of negative or insignificant influences, recent studies indicate positive trends for both variables, which are influenced by government stimulus, ease of access to financing, and improved quality of MSME financing. This confirms that in addition to interest rates and credit risks, capital needs and stable economic conditions are the main factors driving MSME credit distribution.

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