JIET
Jurnal Ilmiah Ekonomi Terapan

JURNAL ILMU EKONOMI TERAPAN
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HOW THE CONSUMER CONFIDENCE INDEX AFFECT THE CREDIT GROWTH IN INDONESIA?

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ABSTRACT

Credit has a positive role in encouraging economic growth in Indonesia. A factor that can influence the level of credit distribution is consumer confidence in economic conditions. Therefore, this research aims to examine the influence of the consumer confidence index and several other factors, such as inflation, third-party funds, and credit interest rates on commercial bank credit distribution in Indonesia. By using time series data for the period 2008:1-2019:12 and the Ordinary Least Square (OLS) method, this research shows that the level of consumer confidence in Indonesia's economic conditions has a positive effect on credit distribution. The higher inflation encourages customers to apply for more credit. Apart from that, the high and low levels of credit disbursement were also positively influenced by the amount of third-party funds but were not affected by high or low credit interest rates. Thus, keeping consumer confidence high and inflation under control even though it is increasing, and raising the number of third-party funds is essential so that the economy continues to grow through the transmission of credit lines.

Keywords: *Loan Distribution, Ordinary Least Square, Consumer Confidence Index, Indonesia*

ARTICLE INFO

Received: April 24th, 2025
Revised: June 22th, 2024
Accepted: June 24th, 2025
Online: June 29th, 2025

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ABSTRAK

Kredit perbankan memiliki peran positif dalam mendorong pertumbuhan ekonomi di Indonesia. Salah satu factor yang bisa mempengaruhi tinggi rendahnya penyaluran kredit adalah kepercayaan konsumen terhadap kondisi perekonomian. Oleh karena itu, penelitian ini ditujukan untuk menguji pengaruh indeks keyakinan konsumen dan beberapa factor lainnya seperti inflasi, dana pihak ketiga, dan suku bunga kredit terhadap penyaluran kredit bank umum di Indonesia. Dengan menggunakan data time seriesperiode 2008:1-2019:12 dan metode Ordinary Least Square (OLS), penelitian ini menunjukkan bahwa tingkat keyakinan konsumen terhadap

Jurnal Ilmu Ekonomi Terapan; p-ISSN: 2541-1470; e-ISSN: 2528-1879
DOI: 10.20473/jiet.v10i1.72079

kondisi ekonomi Indonesia berpengaruh positif terhadap penyaluran kredit. Semakin tinggi inflasi ternyata mendorong nasabah untuk mengajukan kredit semakin banyak. Selain itu, tinggi rendahnya penyaluran kredit ternyata juga dipengaruhi secara positif oleh jumlah dana pihak ketiga, namun tidak terpengaruh oleh tinggi rendahnya suku bunga kredit. Dengan demikian, menjaga kepercayaan konsumen agar tetap tinggi, inflasi yang terkendali meskipun meningkat, dan jumlah dana pihak ketiga yang terus meningkat menjadi penting agar ekonomi tetap tumbuh melalui transmisi jalur kredit.

Kata Kunci: *Penyaluran Kredit, Ordinary Least Square, Indeks Kepercayaan Konsumen, Indonesia*

JEL : E0; E22

To cite this document: Alif, P. F. K., Ajija, S. R., Fitriyana, Z., & Setyorini, W. (2025). How the Consumer Confidence Index Affect the Credit Growth in Indonesia? *Jurnal Ilmu Ekonomi Terapan*, *10*(1), 193-210. https://doi.org/10.20473/jiet.v10i1.72079

Introduction

Banks led in improving economic efficiency by distributing money to customers (Mishkin, 2019). The distribution of money comes from surplus parties to deficit parties who need money (Adzis et al., 2018)the findings demonstrate that bank size and volume of deposit positively influence commercial bank lending in Malaysia, while liquidity negatively influences the lending activities. With regard to macroeconomic determinants, this study does not find any conclusive evidence to support the influence of gross domestic product (GDP. Banks function as part of financial intermediation in customer savings meetings and are re-channelled to customers through credit giving (Jufrizen et al., 2019). The distribution of customers' credit was carried out with care even more during the financial crisis at the end of 2008. These circumstances are not accompanied by strict banking supervision, leading to a surge in credit and global panic (Dewi & Purwono, 2020). The amount of credit at the beginning of January 2008 amounted to IDR 987,404 billion, and a surge in the amount of credit increased to IDR 1,307,688 billion in December 2008 (Bank Indonesia, 2008).

In Indonesia, credit provides money in the form of rupiah and foreign exchange based on agreements between banks and banks with a third party instead of a bank to borrow money and be repaid within a fixed period and given interest (Bank Indonesia, 2012). The amount of credit used to finance the intended third-party needs is household and enterprise (Awdeh, 2016). Households applying for bank loans are used to consume personal goods and services, whereas companies are for investment and working capital. The activities of households and enterprises in making those credit loans can affect economic activities (Utari et al., 2012). Thus, banking credit that becomes one of the sources of funding for households and companies implicates importance to economic activities in a country.

The development of public bank credit distribution cannot be independent of the role of households as the driving wheel for economic activities in Indonesia (Utari et al., 2012). The Bank of Indonesia surveyed consumer activity to obtain information on household consumer behaviour. This consumer survey indicates the consumer's optimistic or pessimistic attitude toward economic activities in Indonesia (Bank Indonesia, 2020). Surveyors assisted with the consumer survey in cooperation with the Bank of Indonesia. For the first time, the Survey was held in October 1999. Consumer surveys were conducted in 18 major cities in Indonesia, reaching about 4,600 respondents (Bank Indonesia, 2020). Households as survey respondents were determined to be random or random sampling with the upper middle category with

excess money to spend. Both direct and telephone interview methods obtained data. Consumer confidence data on economic conditions in Indonesia, household income, price levels, and consumption plans were obtained through consumer surveys.

Consumer confidence in economic conditions is judged to impact the credit distribution of general banks in Indonesia because consumer sentiment plays a crucial role in households' decision-making (Kłopocka, 2017). The explanation of trust is critical for banks and financial institutions to maintain customers (Murti & Santika, 2016). Financial services offered by banks become the subject of customers' consideration when selecting and giving trust in banking. Trust from customers is necessary for the banking intermediation function to be performed. Therefore, banking is expected to grow customers' trust. There is currently no specific data available regarding the trust indicators of banking customers. Based on these conditions, this study used the Consumer Confidence Index (CCI) to reflect customers' confidence levels in banking. The CCI indicates optimism regarding consumers' outlook for economic conditions (Bank Indonesia, 2019). The higher CCI is judged to represent the higher the customer's confidence in banking.

The CCI and credit distribution are judged to have a positive relationship. Trust becomes a factor that supports the commitment between customers and banking. Trust in banking must be built to create good relations between creditors and debtors. The situation will eventually bring about customer loyalty to the bank. The lack of trust attitude in banks caused debtors to lower interest in applying for credit, so the bank's credit distribution to debtors decreased (Maesaroh & Sucianti, 2019). Households and corporations reduce expenditures, which causes households and enterprises to meet the need to avoid applying to banks (Demirel & Artan, 2017). Meanwhile, companies are taking action to reduce or even delay credit demand, causing banks' credit distribution to suffer a downturn. Companies suffering from capital shortage conditions chose to reduce production, which reduced the number of employees or layoffs (Wijaya, 2019).

Some studies have discussed the distribution of commercial bank credit using variables that are like each other. However, several researchers still need to pay more attention to many essential variables closely related to credit distribution. The credit demand side is supported by optimistic consumer expectations, especially income expectations (Ivanovic, 2016). This research is related to consumer confidence in the state of the economy, although research regarding consumer confidence in lending has yet to be widely studied. Therefore, it is necessary to include the CCI variable in research on credit distribution (Kłopocka, 2017; Kapusuzoglu et al., 2019).

In Indonesia, credit distribution from commercial banks before the COVID-19 pandemic, namely from 2008 to 2019, continued to increase along with the development of third-party funds. Credit interest rates did not change much during this period, even though the trend tended downward. Inflation can also be well maintained and stable even though it fluctuates. Meanwhile, the CCI shows a fluctuating and positive trend, as shown in Figure 1.

According to Figure 1, CCI tends to influence credit distribution in Indonesia. Therefore, the process of distributing public bank loans in Indonesia must be analyzed more in-depth so that bank credit to customers is done safely and reliably (Murdiyanto, 2022). Therefore, the credit distribution of public banks in Indonesia in this study is described by several variables, including demand and supply. On the demand side, the indicators in the study are the Consumer Confidence Index and Inflation. Meanwhile, the side of the research offering pointed out third-party funds and credit interest rates. Based on the above circumstances, the author is enticed to examine the influence of the consumer confidence index, inflation, third-party funds, and credit interest rates on general bank credit distribution in Indonesia.

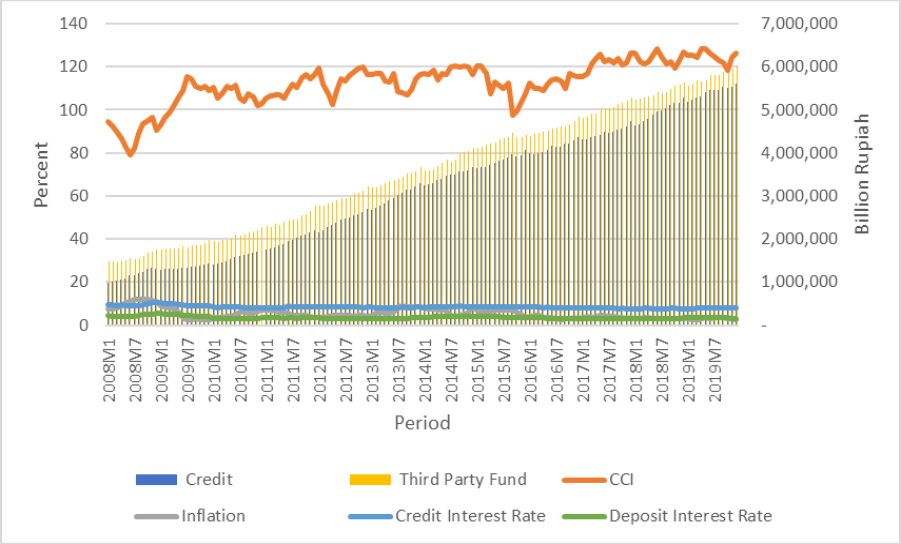

Figure 1: Trend of Credit, Third Party Fund, CCI, Inflation, Credit and Deposit Interest Rate in Indonesia from 2008 to 2019

Some researchers still ignore important variables that are closely related to credit distribution. Ivanovic's (2016) research states that the demand side of credit is supported by optimistic consumer expectations, especially income expectations. This is related to consumer confidence in the state of the economy. However, research on consumer confidence in credit distribution has not been widely studied. Research by Kłopocka (2016) and Kapusuzoglu et al. (2017) states that it is necessary to include the Consumer Confidence Index variable in research on credit distribution. The Consumer Confidence Index reflects the trust of bank customers. This is supported by an increase in the consumer confidence index causing consumption to increase so that consumers are able to make decisions in requesting credit (Maesaroh and Sucianti, 2019). Meanwhile, if the consumer confidence index decreases, the demand for credit from consumers to banks will decrease. Financial services offered by banks in the form of credit affect consumer confidence. Thus, this study focuses on looking at the obstacles to achieving credit distribution. The main contribution in this study is to include the Consumer Confidence Index variable in looking at obstacles that have not been studied and analyzed by previous researchers.

Literature Review

Understanding the determinants of credit distribution in commercial banks requires a robust theoretical foundation and empirical support. A prominent theoretical model used in analyzing credit flows is the Loanable Funds Market Theory, which illustrates the equilibrium between the supply and demand of credit in financial markets. According to Mankiw (2012), this market operates as a mechanism through which savers provide funds for borrowers, mediated primarily through the banking system. The supply side comprises households and entities with surplus funds willing to save, while the demand side consists of consumers and firms requiring loans for consumption or investment purposes.

Interest rates play a pivotal role in balancing this market. As interest rates increase, the cost of borrowing becomes higher, leading to a decline in loan demand. At the same time, higher interest rates incentivize savings, increasing the supply of loanable funds. Conversely, lower interest rates encourage borrowing but dissuade saving. This inverse relationship between interest rates and the volume of credit demand and the positive relationship with supply culminate in a market equilibrium that reflects the overall macroeconomic environment (Mankiw, 2019). Fluctuations in this equilibrium, driven by changes in consumer expectations or inflation, impact banks' credit policies and broader economic activity.

Another relevant theoretical construct is the credit channel mechanism of monetary policy transmission. This framework highlights the crucial role that bank lending plays in transmitting central bank policies to the real sector. The central bank interacts with commercial banks in the money market through operations such as open market transactions. These actions affect banks' liquidity positions and, subsequently, their ability to extend credit. The efficiency and responsiveness of this mechanism are often constrained by market imperfections such as asymmetric information, which can hinder the flow of credit, particularly during economic downturns (Warjiyono, 2004).

Inflation emerges as a key macroeconomic variable influencing credit distribution. Defined as the general and sustained increase in prices over time (Mishkin, 2019), inflation affects both the demand and supply sides of credit. On one hand, high inflation can reduce the real value of money, prompting borrowers to seek more credit to maintain consumption and production levels. On the other hand, it can undermine savers' confidence and reduce the availability of funds for lending. Empirical studies reveal mixed findings: while some research indicates that inflation exerts a negative impact on credit supply due to increased uncertainty and withdrawal of savings (Korkmaz, 2015; Wahab, 2015), other studies argue that short-term inflationary pressures can lead to increased borrowing, especially for consumption during seasonal demand spikes (Thaker et al., 2014; Baoko et al., 2017).

The Life Cycle Hypothesis of Saving, introduced by Modigliani, provides further behavioral insight into saving and borrowing patterns. It posits that individuals plan their consumption and savings behavior based on their expected lifetime income. Typically, people borrow in their early years, save during their peak earning period, and dissave in retirement (Afdhal et al., 2014). This theory implies that income distribution across an individual's life span significantly affects credit behavior. During periods of high income, individuals are more likely to save and supply funds to financial institutions, while during low-income periods, they rely more on borrowing.

Another relevant theoretical construct is Rational Expectations Theory. Rational Expectations Theory states that individuals and economic actors make decisions based on rational expectations, which are the best predictions that use all available information efficiently (Muth, 1961). In this theory, prediction errors are random and unsystematic because market actors learn from experience and understand how the economy works (Sargent, 1987). As a result, predictable economic policies, such as printing money by the central bank, will be anticipated by the public and therefore ineffective in changing output or unemployment in real terms (Lucas, 1972). This theory is an important foundation in the New Classical Economics approach which emphasizes that rational expectations must be taken into account in every economic policy (Snowdon & Vane, 2005).

Empirical studies on the determinants of bank credit distribution frequently emphasize the role of consumer confidence. The Consumer Confidence Index (CCI) captures the public's expectations regarding the economy and has been found to significantly influence credit decisions. A higher CCI is generally associated with greater optimism, leading to an increase in credit uptake as consumers and businesses feel more secure in making financial commitments (Kapusuzoglu et al., 2017). This confidence also reflects trust in the banking system, as customers' willingness to borrow hinges on their perception of institutional reliability (Maesaroh & Sucianti, 2019; Kłopocka, 2016).

Third-party funds, or customer deposits, constitute the main resource for banks to extend credit. The relationship between deposit levels and credit availability has been well-documented in the literature. A rise in deposits increases the liquidity available to banks, enabling them to meet higher credit demand. Numerous studies across various economies confirm the positive influence of deposits on credit distribution (Guo & Stepanyan, 2011; Hermuningsih et al., 2020; Ivanovic, 2016). In emerging markets, where alternative funding sources are limited, this relationship becomes even more critical. Banks act as financial

intermediaries, transforming public savings into productive investments, a role that underscores the importance of efficient deposit mobilization and management (Adzis et al., 2018; Olokoyo, 2011).

Interest rates, particularly lending rates, also serve as an essential factor in credit distribution. While higher lending rates may constrain demand due to increased repayment burdens, they also represent a source of income for banks. Under certain conditions, high lending rates do not necessarily curtail credit flows, especially when economic expectations remain stable and borrowing remains essential (Amelia et al., 2015; Muzayyinulhaq, 2019). According to the Loanable Funds Theory, when real interest rates are elevated, the supply of credit tends to rise due to stronger incentives to save, further supporting credit availability (Assefa, 2014).

In conclusion, the distribution of credit in commercial banks is influenced by a confluence of theoretical and empirical factors, including interest rates, inflation, consumer confidence, savings behavior, and the volume of third-party funds. These elements interact in complex ways, often moderated by the macroeconomic environment and regulatory frameworks. An integrated understanding of these factors is vital for policymakers and financial institutions aiming to ensure a stable and efficient credit system.

Based on the theoretical framework and previous empirical findings, this study formulates the following hypotheses:

H1: Consumer Confidence Index has a significant influence on the bank credit distribution in Indonesia.

H2: Inflation rate has a significant influence on the bank credit distribution in Indonesia.

H3: Third-Party Funds have a significant influence on the bank credit distribution in Indonesia.

H4: Lending interest rates have a significant influence on the bank credit distribution in Indonesia.

Data and Research Methods

Table 1: The Definition of Variables

Variable	Definition	Unit	Sources
Credit	Loan distribution to third parties	Billion Rupiah	Otoritas Jasa Keuangan
Consumer Confidence Index	Index to reflect the confidence of bank customers.	Point	Bank Indonesia
Inflation	Increase in the price of goods in percent annual change	Percentage	Badan Pusat Statistik
Third Party Funds	Current accounts, savings and time deposits	Billion Rupiah	Otoritas Jasa Keuangan
Interest Rates	Price paid by borrower to lender	Percentage	Otoritas Jasa Keuangan

This study uses quantitative methods to determine the effect of variables. The data analyzed are from January 2008 to December 2019 because, during those periods, credit distribution conditions in Indonesia were relatively stable despite the global crisis in early 2008. This research was also carried out until 2019 only because it avoided anomalous conditions in credit distribution due to sluggish economic conditions during the COVID-19 pandemic. The analytical tool used to support the research is the ordinary least square (OLS) to determine the significant effect of the independent variable on the dependent variable. OLS method is chosen because it is one of the most potent methods of regression analysis,

and its estimator is linear, unbiased, and has a minimum variance value, so it is called BLUE (Best Linear Unbiased Estimator) (Gujarati & Porter, 2009). Moreover, the data was processed using STATA: 14 software.

Research regarding the effect of CCI on credit in Indonesia was conducted by Maesaroh and Sucianti (2019) using a PT case study. Bank Mandiri Tbk, Mandiraja branch in Banjarnegara, Central Java. They utilized OLS to measure the impact of interest rate, brand image, and consumer confidence on the credit disbursement of the bank. This current study, hence, would like to continue the research of Maesaroh and Sucianti (2019) to the macro level by adding inflation as a macroeconomic indicator and third-party funds as a source of funds for the bank. We did not include brand image since we did not collect primary data from the banks' customers. Therefore, the empirical model in this study is used as follows:

$$LnCreditt = \alpha + \beta 1CCIt + \beta 2INFt + \beta 3LnTPFt + \beta 4IRt + \varepsilon t \quad (1)$$

The natural logarithm of credit (LnCredit) is used in the study, using indicators for distributing commercial bank credit funds to third parties using data available in the Indonesian Banking Statistics. Credit is the total of borrowed funds. This credit variable is the dependent variable in the study. This credit comes from parties who experience excess income and is collected in banks, so other parties with a lack of funds can apply for bank loans. Commercial banks carry out credit disbursement as intermediary institutions to bring together parties with excess funds. However, they cannot utilize these funds productively, so banks distribute funds to customers who need loans to be managed productively.

According to Bank Indonesia (2022), the consumer confidence index indicates the attitude of consumer optimism and pessimism towards economic conditions in the country. The consumer confidence index reflects bank customers' decisions, so the number of lending also increases. The consumer confidence index is measured using a balance score. The definition of a balance score compares the percentage of respondents who gave an increased answer and the percentage of respondents who gave a decreased answer.

$$Balance\ Score = (\%\ Answer\ Increase - \%\ \ Answer\ Decrease) + 100 \quad (2)$$

Inflation (INF) is an increase in the price of goods expressed as a percentage change rate annually or year on year (yoy). Inflation indicates a condition where there is much demand, but the availability of goods offered by the market remains or does not increase, so the price of goods will soar. Inflation affects a person's decisions in managing finances. When inflation occurs, people withdraw funds collected from banks to meet high needs due to price increases. Inflation is calculated through the Consumer Price Index (CPI).

$$CPI\ monthly = \left(\frac{I_n}{I_{(n-1)}} - 1\right) x100 \quad (3)$$

Explanation :

I_n : Consumer Price Index month to-n

$I_{(n-1)}$: Consumer Price Index month to (n-1)

In this study, we use third-party funds (TPF) in form of natural logarithm, the deposits, or savings from banking customers. Customer deposits are deposits owned by third parties in rupiah and foreign currencies in the form of demand deposits, savings, and time deposits. Third-party funds are the origin of the creation of funds to carry out operational bank activities and become a benchmark for determining the bank's success level. So that the bank can finance banking operations, third-party funds from households and business actors are collected and become the largest source of funds for banks. Sources of bank funds must be redistributed

to customers because funds come from the community, so they must be channelled again to bank customers in the form of commercial bank lending.

The credit interest rate (IR) is the remuneration for the loan of money that has been given. Someone pays a certain amount for the opportunity given because he has been given a loan. The interest rate is the annual interest deposit as a percentage of loan funds. This interest rate is divided into two forms, namely savings interest rates and loan interest rates. Households and companies use interest to determine saving and investment decisions. Savings interest rates are a way for banks to collect funds from customers and provide remuneration to customers. Meanwhile, the loan interest rate is the price paid by the borrower given to the lender. The decline in loan interest rates causes a decrease in the amount of credit that banks can offer.

This research utilizes OLS to estimate the impact of CCI and other explanatory variables on economic growth. Despite its predominance, the weakness of OLS is that it cannot detect and is not robust against outliers. Robust standard errors fix OLS weaknesses and problems in violating classical assumptions. The problem of classical autocorrelation test assumptions can be corrected by using two methods, namely the Generalized Least Square (GLS) as explained and the Newey-West methods by Gujarati & Porter (2009). If the regression coefficient in the robust estimator remains inefficient, however, this estimator can conclude even though there is an autocorrelation problem in the study. Therefore, this research uses the OLS method and robust standard error for the best results.

To get the best estimation, we use several steps to test OLS. The first step in the OLS method is OLS estimation using statistical tests. After estimating OLS with statistical tests, the next step is to do a classical assumption test to see if there are violations of classical assumptions such as heteroscedasticity, multicollinearity, and autocorrelation. The last step is to estimate the robust standard error. Robust is a tool to detect outliers or outliers in the data.

Result and Discussion

The researcher obtained the data, and then the next step was analyzed using the OLS method and estimated using STATA 14. The independent variables in this study are the consumer confidence index, inflation, third-party funds, and loan interest rates, which influence lending to commercial banks in Indonesia. The four independent variables in this study were estimated and analyzed using the ordinary least square (OLS) method so that these four independent variables can influence the distribution of commercial bank credit in Indonesia.

Table 2 presents the descriptive statistics of the variables. The credit distribution variable is expressed in natural logarithmic (Ln) form. The average value of the log-transformed commercial bank credit distribution is 14.842, with a standard deviation of 0.511. This means that, on average, the natural log of the credit accessed by the community during the research period was 14.842. The minimum and maximum values are 13.802 and 15.541, respectively, in log form.

The consumer confidence index has an average value of 112.57 points with a standard deviation of 10,191, meaning that the public has confidence in Indonesia's banking world by 112.57 points in the research period. The smallest value of the consumer confidence index in Indonesia during the research period was 79.1 points, while the highest value was 128.2 points.

Inflation averages 5,276 per cent with a standard deviation of 2,340, meaning there was an increase in the prices of goods in general, with an average of 5,276 per cent in the

research period. The smallest inflation value in Indonesia during the research period was 2.41 per cent, while the highest value was 12.14 per cent.

The third-party funds variable is expressed in natural logarithmic (Ln) form. The average value of the log-transformed third-party funds is 15.01, with a standard deviation of 0.427. This indicates that, on average, the natural log of customer deposits collected by banks during the research period was 15.01. The minimum and maximum values of the log-transformed third-party funds are 14.19 and 15.60, respectively. To provide a sense of the actual scale, these log values correspond approximately to 1,464,255 billion rupiah (exp(14.19)) and 5,994,842 billion rupiah (exp(15.60)) in customer deposits.

The credit interest rate has an average value of 8.42 per cent and a standard deviation value of 0.60128, meaning that customers are more aware of repaying their borrowed loans by 8.42 per cent. The smallest value of credit interest rates during the research period was 7.54 per cent, while the highest value was 10.37 per cent.

Table 2: The Descriptive of Data

Description	n	Mean	Min	Max	Standard Deviation
LnCredit	144	14.842	13.802	15.541	0.511
CCI	144	112.577	79.1	128.2	10.191
INF	144	5.276	2.41	12.14	2.340
LnTPF	144	15.012	14.198	15.607	0.427
IR	144	8.425	7.54	10.37	0.601

Furthermore, the results of the OLS estimation are shown in Table 3. The loan interest rate variable has no effect on the distribution of commercial bank credit in Indonesia. Meanwhile, the consumer confidence index, inflation, and third-party funds influence the distribution of commercial bank credit in Indonesia.

Table 3: OLS Estimation Results

	Dependent Variable: LnCredit			
	Coefficient	***Standard Error***	**t-stat**	**Probability**
CCI	0.000835	0.0003719	2.26	0.026**
INF	0.0089972	0.0012005	7.49	0.000*
LnTPF	1.210026	0.0080869	149.63	0.000*
IR	0.0024926	0.0048813	0.51	0.610
Constant	-3.486175	0.1303462	-26.75	0.000*
R-Squired	0.9981		F(4,139)	18463.28
Adj. R-Squired	0.9981		Prob > F	0.0000*
Observation	144			

Note: *,**,*** shows statistical significance in α (1%, 5%, dan 10%) respectively

Table 4: Multicolleniarity Test

Variable	VIF	1/VIF
CCI	4.06	0.246596
INF	3.37	0.296986
LnTPF	2.43	0.411131
IR	2.23	0.448749
Mean VIF	3.02	

The calculation results show that the VIF value of each independent variable, namely the consumer confidence index, inflation, third-party funds, and credit interest rates, is less than 10. These results are based on the hypothesis that H_0 is accepted and H_1 is rejected. This test concludes that there is no multicollinearity problem between the study's independent and dependent variables.

Table 5: Heteroskedasticity Test

Chi2	0.30
Prob> Chi2	0.5859

Table 5 shows the calculation results showing that the probability of chi-square is more than 5%. The results of the heteroscedastic problem test were proven by prob. chi-square with a value of 0.5859 has a value of more than 5%. Based on this statement, H_0 is accepted, and H_1 is rejected. So, we can conclude that in this study, there is no heteroscedastic problem or that this research is included in homoscedasticity.

Table 6: Autocorellation Test

Chi2	92.840
Df	1
Prob>Chi2	0.0000

The calculation results show that the probability value of chi-square is lower than = 5%, i.e. 0.0000. Based on these results, it is known that H_0 is rejected and H_1 is accepted. So, this study has an autocorrelation problem. This study contains an autocorrelation problem where it has been explained that there is a relationship and interrelatedness between observational data based on time. For example, there is a correlation between the observations of this month and the previous month. In line with the previous explanation, which is that this study contains a classical assumption test problem, the test can be improved by using a robust standard error to get an OLS estimate with excellent and good conditions (Vogelsang, 2012). Therefore, his research was improved by using robust standard error so that the results of the robust standard error are explained after the classical assumption testing stage.

Table 7: Robust Standard Error Estimation Results

	Dependent Variable : LnCredit			
	Coefficient	***Robust Standard Error***	**t-stat**	**Probability**
CCI	0.0008395	0.0003638	2.31	0.023**
INF	0.0089972	0.001189	7.57	0.000*
LnTPF	1.210026	0.0071442	169.37	0.000*
IR	0.0024926	0.0051211	0.49	0.627
Constant	-3.486175	0.1184483	-29.43	0.000*
R-squired	0.9981		F(4.139)	18682.72
Observation	144			

Note: *,**,*** shows statistical significance in α (1%, 5%, dan 10%) respectively

Based on Table 7, it is known that the regression equation for the estimated robust standard error in the study is as follows:

$$\text{LnCredit} = -3.486175 + 0.0008395\ \text{CCI} + 0.0089972\ \text{INF} + 1.210026\ \text{LnTPF} + 0.0024926\ \text{IR}$$

Table 7 is the result of robust standard error to strengthen the results and fix the problem of violating classical assumptions. The results of the robust standard error show that

loan interest rates do not affect lending to commercial banks in Indonesia. Where the p-value > 0.05 is 0.627. The consumer confidence index variable significantly influences commercial bank lending in Indonesia because the p-value < 0.05 is 0.023. The inflation variable has a significant influence on the distribution of commercial bank loans in Indonesia because the p-value < 0.01 is 0.000. The third-party fund variable significantly influences commercial bank credit distribution in Indonesia because it has a p-value < 0.01. Based on the robust standard error, it is known that the R-squired value is 0.9981 or 99.81%. Since R^2 represents the proportion of total variation in the dependent variable explained by the regression model (Gujarati & Porter, 2009), its value of almost 1 indicates that the regression line of the model is fit.

Discussion

Effect of Consumer Confidence Index on Credit Distribution Commercial Banks

Based on the estimated regression using robust standard errors, the coefficient for the Consumer Confidence Index (CCI) is 0.0008395, indicating that a 1-point increase in consumer confidence leads to a 0.00083% increase in commercial bank credit distribution, holding other variables constant. Although the magnitude appears small, this result is consistent with the initial hypothesis and confirms the significant role of consumer sentiment in influencing borrowing behavior. This finding supports Kłopocka (2017), who found that the CCI has a stronger influence on borrowing than saving behavior in Poland, and Kapusuzoglu et al. (2019), who identified a long-run relationship between Turkey's CCI and consumer credit. Similarly, Maesaroh and Sucianti (2019) found that customer confidence positively affects credit disbursement at PT. Bank Mandiri Persero in Banjarnegara, East Java.

The consumer confidence index reflects public expectations about the future economic outlook, where increased optimism can lead to more active borrowing. This aligns with Černohorský (2017), who emphasized that households and companies use credit to support consumption and investment, contributing to national economic development. In this context, confidence in the economy—and by extension, in the banking system—can play a decisive role in credit decisions.

The regression model also shows that consumer confidence index has a statistically significant and positive effect on credit distribution, with a coefficient of 0.0089972. While this value is small, its practical implications are meaningful. A 1 percentage point increase in consumer confidence index is associated with a 0.009% increase in credit distribution. As noted by Kapusuzoglu et al. (2019), rising consumer confidence and tend to stimulate consumption, which can increase the likelihood of applying for credit.

These dynamics illustrate the different borrowing motivations between households and businesses. According to Kłopocka (2017), household lending behavior is strongly influenced by consumer trust. When consumers believe in the bank's credibility and the economy's prospects, they are more likely to apply for loans. This is particularly true in Indonesia, where households often base credit decisions on both financial need and trust in banking services.

Trust remains a central factor. As explained by Murdiyanto (2022), credit agreements involve risk, and banks assess borrowers' reliability before extending loans. In this study, that trust is captured through the consumer confidence index.The CCI as a measure of optimism or pessimism about the future economy, which in this context also reflects the public's confidence in banking services (Bank Indonesia, 2020).

In conclusion, this study finds that consumer confidence positively influence commercial bank credit distribution. These findings highlight the need for banks to monitor macroeconomic indicators—especially consumer sentiment—as early signals of changing credit demand. Policymakers should also foster economic stability and strengthen public trust in financial institutions to ensure sustainable credit growth, which is essential for long-term economic development (Duican (Moisescu) & Pop, 2015).

Effect of Inflation on Commercial Bank Credit Distribution

Based on the robust standard error, the coefficient for inflation is 0.0089972, indicating that a 1% increase in inflation is associated with only a 0.0089972% increase in commercial bank credit distribution, assuming other variables remain constant. Although this effect is statistically significant, it is economically modest. This suggests that while inflation does influence lending behavior, its overall impact is limited and possibly overshadowed by other macroeconomic or financial variables. The small magnitude also implies that the inflation–credit relationship may be more relevant in specific short-term contexts rather than as a dominant long-term determinant.

In the short term, inflation can stimulate borrowing among households and businesses. For households, rising prices reduce purchasing power, prompting those in middle- and lower-income groups to seek additional credit to maintain consumption. This reflects a behavioral response to inflation-induced financial pressure, especially when income levels remain stagnant while the cost of goods rises. Baoko et al. (2017) argue that inflation can positively and significantly affect commercial bank credit in the short run, as people rely more on credit to meet everyday needs. Similarly, business actors often face increased production costs during inflationary periods and may respond by applying for bank loans to cover these operational expenses and maintain output levels.

However, in the long term, inflation generally has a dampening effect on credit distribution. According to Korkmaz (2015), sustained inflation creates uncertainty and reduces the real value of both income and savings, discouraging long-term financial planning and investment. High inflation can also reduce household saving rates, lower bank deposit volumes, and thereby limit the funds available for lending. Additionally, banks may become more conservative in their credit allocation, especially for long-term loans, due to concerns over repayment risk and the erosion of loan value over time. Wahab (2015) also highlights that under prolonged inflationary conditions, borrowers may hesitate to take loans, anticipating future monetary devaluation that increases repayment burdens in real terms.

The contrasting effects of inflation on credit distribution underscore the importance of differentiating between short-term and long-term impacts. In the short term, inflation may drive up credit demand out of necessity, especially for consumption and working capital. In contrast, persistent inflation tends to create caution in both borrowers and lenders, leading to a tightening of credit. This dual effect explains why literature on the subject, such as studies by Thaker et al. (2014), Awdeh (2016), Anderson et al. (2017), Adeleye et al. (2018), and Dhungana & Pradhan (2018), often finds a positive relationship between inflation and credit in the short run but more complex or negative outcomes over longer periods.

Furthermore, inflation impacts households and businesses differently. Households tend to borrow for consumption when prices rise, while businesses borrow to finance increased input costs. In both cases, loans are typically short term. This can have a multiplier effect—businesses continue operating, employment is maintained or expanded, and incomes

increase, eventually leading to higher bank deposits and enabling further credit distribution. However, this cycle is only sustainable if inflation is controlled and does not spiral into long-term instability. Policymakers and banks must therefore consider these varying dynamics when setting interest rates, credit policies, and inflation targets.

The Effect of Third Party Funds on Commercial Bank Credit Distribution

Based on the robust standard error, the result is 1.210026, which means that when third-party funds increase by 1 billion rupiahs, the distribution of commercial bank credit increases by approximately 1.21%, assuming other variables remain constant. Third-party funds, which consist of deposits from households and businesses, are a critical component of a bank's operations. These funds serve as the main source of capital that banks can redistribute in the form of credit. According to Wahab (2015), the ability to gather third-party funds is a key indicator of a bank's operational strength, as these deposits allow banks to meet lending demands in the economy. Lending itself is a fundamental banking activity, and the volume of available third-party funds directly affects how much a bank can lend.

The findings support the initial hypothesis that third-party funds positively and significantly influence commercial bank credit distribution in Indonesia. This is consistent with research by Hermuningsih et al. (2020), which found that third-party funds are a dominant factor in bank lending, often contributing 80% to 90% of total bank funds. When public deposits rise, banks have greater flexibility to extend credit to borrowers, fulfilling their intermediary role of channeling funds from surplus units to deficit units. In this sense, deposits are not only a financial input but also a driver of credit supply.

The tendency of individuals to save—especially when they have surplus income—is also reflected in Modigliani's Life Cycle Hypothesis, which posits that people save during high-income periods and draw down savings during low-income periods such as retirement. Thus, higher income levels can lead to increased deposits, which in turn support greater lending. While this study suggests that people may feel safer saving in banks due to layered security systems and deposit guarantees, it should be noted that this claim is theoretical and not based on direct empirical evidence within this research.

Empirical studies further strengthen the observed relationship between deposits and credit. For example, Guo & Stepanyan (2011), Malede (2014), and Awdeh (2016) found that an increase in deposits significantly boosts credit allocation. Similarly, Adzis et al. (2018) emphasized that attracting depositors is crucial for banks both as a funding strategy and a profit-generating mechanism. Ivanovic (2016) and Imran & Nishat (2013) also identified savings as a key factor on the supply side that affects credit expansion. Swamy (2012) confirmed the importance of savings in determining bank lending across different economic conditions in India. Together, these findings underscore the importance of third-party funds in supporting credit distribution, reaffirming the role of banks as financial intermediaries that mobilize public savings into productive economic activity.

The Effect of Loan Interest Rates on Commercial Bank Credit Distribution

The model estimation results show that loan interest rates have a positive but statistically insignificant effect on commercial bank credit distribution in Indonesia. This means that although the direction of the relationship suggests that higher interest rates may be associated with increased credit distribution, the result is not strong enough to conclude that this relationship is statistically meaningful. Therefore, the study fails to reject the null hypothesis, which posits no significant effect of loan interest rates on lending.

This finding aligns with Malede (2014), who also found a positive but insignificant effect of credit interest rates on commercial bank lending. It suggests that interest rates alone may not be a primary driver of lending behavior in the Indonesian context and that other factors—such as borrower creditworthiness, collateral, or macroeconomic conditions—may have a stronger influence.

While Adzis et al. (2018) highlight that credit interest rates represent the cost borrowers must bear and serve as a key income source for banks, in practice, commercial banks in Indonesia may not see large fluctuations in lending behavior purely in response to interest rate changes. When interest rates rise, borrowers might become more cautious, reducing loan demand. Conversely, if banks lower interest rates too much, their profitability declines, and they may limit credit supply. This dual effect aligns with Loanable Funds Theory, which posits that the equilibrium interest rate balances the supply and demand for loanable funds.

However, it is important to note that statistical insignificance does not necessarily imply that loan interest rates have no real-world effect. The lack of a significant relationship in this study could be influenced by factors not captured in the model, such as loan demand elasticity, inflation expectations, or broader macroeconomic and regulatory conditions. It is also possible that in Indonesia, borrowers are less responsive to marginal interest rate changes, especially if they have limited alternatives or strong financing needs. As such, future research should consider including mediating or moderating variables that might better explain the relationship between interest rates and credit distribution.

Conclusion

Summary of Main Findings

This study examined the influence of the consumer confidence index, inflation, third-party funds, and credit interest rates on the credit disbursement by commercial banks in Indonesia using multiple linear regression analysis (OLS). The findings reveal that the consumer confidence index, inflation, and third-party funds all have a positive and significant effect on credit distribution, while credit interest rates show no significant effect. This suggests that consumer sentiment, macroeconomic conditions, and deposit levels play more prominent roles in shaping lending patterns than interest rate fluctuations during the study period.

Policy Implications

Given the strong influence of the consumer confidence index on credit, policymakers should consider this variable as an important indicator when designing monetary and financial policies. Ensuring stable economic conditions and fostering public optimism can encourage borrowing, which may contribute to broader economic activity. The positive relationship between inflation and credit also suggests that moderate, demand-driven inflation—likely reflecting increased income and business activity—can stimulate productive lending. Furthermore, the consistent influence of third-party funds confirms the importance for banks to continue attracting public deposits, which remain the main resource for lending. Meanwhile, the insignificant role of credit interest rates implies that customers may not be highly sensitive to minor rate changes, especially when rates are relatively stable. This stability should be maintained to avoid unsettling lending behavior.

Limitations of the Study

One key limitation of this study is the use of aggregated macro-level data, which may mask variations in credit behavior across customer segments, regions, or bank types.

Additionally, the study does not distinguish between types of inflation (e.g., cost-push vs. demand-pull), which could have differing impacts on credit demand. The analysis also does not account for external shocks or policy interventions that may have influenced credit disbursement during the research period.

Suggestions for Further Research

Future studies should explore in greater depth the causes of inflation during the research period to better understand its relationship with credit expansion. It is also recommended to conduct research using micro-level or panel data, such as across different banking institutions or customer types, to capture more granular insights. Furthermore, more investigation is needed into how the consumer confidence index can be influenced or managed through policy instruments, particularly during times of economic uncertainty. Studying mechanisms to stabilize public perception could be valuable for supporting sustainable credit growth and macroeconomic stability.

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