

INFLUENCE ANALYSIS LOAN INFORMATION ON INTEREST RATE IN PEER TO PEER LENDING

Evi Maria, P. Basuki Hadiprajitno

Faculty of Economics and Business, Diponegoro University

Email: evimaria@students.undip.ac.id, basuki@lecturer.undip.ac.id

Keywords: Age, Gender, Education, Marital Status, Credit Limit, Term of The Loan, Platform Age, P2P, Interest Rates, Funders.

Abstract

Technology has developed rapidly and affected every community's life. This condition was also supported by the occurrence of a pandemic in early 2020 which resulted in restrictions on mobility between individuals and other humans to reduce the spread of the virus which resulted in a crisis. One of the technological developments in the financial sector is loan products through the Peer to Peer platform. Namely transactions that use an online platform that functions as an intermediary that connects borrowers and lenders to carry out lending and borrowing transactions without meeting physically. P2P transaction mechanisms that are carried out directly between borrowers and investors provide risk directly to investors for the success of their funding through the P2P platform. Therefore, in conducting a direct analysis of the loans to be financed, investors must have adequate information so that they can make the best analysis for the financing they are doing. This mechanism allows for information asymmetry on the part of borrowers and investors. The level of trust from lenders is an important factor that will influence their decision as investors to provide funds to borrowers. This confidence can be obtained, among other things, by studying the various available information. In addition, there is the phenomenon of an increase in borrowers and lenders in P2P transactions in Indonesia. It is necessary to pay attention to whether this decision affects interest rates for lending through P2P platforms.

INTRODUCTION

Technology has developed rapidly and affected every community's life where technology has removed the constraints of time and distance so that community activities can be carried out in any location, all the time, and exchange information quickly. This condition was also supported by the occurrence of a pandemic in early 2020 which resulted in restrictions on mobility between individual humans and other humans to reduce the spread of the virus which resulted in a crisis. One of the technological developments in the financial sector is loan products through the Peer to

How to cite: Evi Maria, P. Basuki Hadiprajitno (2024) Influence Analysis loan Information on Interest Rate in Peer to Peer Lending, *Volume 5 Issue 1 January 2024*

E-ISSN: [2807-6362](https://doi.org/10.24127/2807-6362)

Published by: [Politeknik Siber Cerdika Internasional](http://www.politekniksiber.com)

Peer (P2P) platform, namely direct lending and borrowing activities between two parties without being bridged by a financial institution that carries out the intermediation function.

P2P lending using platforms online that functions as an intermediary that connects borrowers and lenders to carry out lending and borrowing transactions without meeting physically. This mechanism is carried out directly between the borrower and the investor, providing risk directly to the investor for the successful funding through the P2P platform. Therefore, in conducting a direct analysis of the loans to be financed, investors must have adequate information so that they can make the best analysis for the financing they are doing. This mechanism allows for information asymmetry on the part of borrowers and investors. Information received by investors about borrowers and their loans may not match investor needs because the information provided on the P2P lending platform already has its own template. This is different from traditional financing through banking where employees in banking have a more complete type of product knowledge because banks have been doing transactions for a long time and banks have the ability to ensure the return of their financing, besides that banking is also an industry that has strict regulation and supervision by supervisory agencies. . On the other hand, banks also have access to credit report information through the application of a financial information service system provided by their supervisory agency. Although information asymmetry still exists, the risk is much lower than that of the P2P Lending industry. The level of trust from lenders is an important factor that will influence their decision as investors to provide funds to borrowers. This confidence can be obtained, among other things, by studying the various available information. Research from Chen (2012) and Bachmann et al. (2011) concluded that one of the fundamental problems that increase risk in lending and borrowing through P2P platforms is information asymmetry, which is influenced by several types of information.

To mitigate credit risk, interest rates are one of the tools that can reduce the risk of default on the loan in question. In making funding, investors must have adequate information in order to be able to do the best analysis for the financing they do, this is to ensure investors understand the risks taken from the funding made. Information obtained by investors through the P2P platform includes information related to age, gender, education level, marital status, credit limit, credit period, and age of the P2P platform. This information becomes the independent variable in this study which will measure the effect of this information on interest rates. There is a phenomenon of increasing borrowers and lenders in P2P transactions in Indonesia.

METHOD

Data Type

This study uses a quantitative approach to measure the significance of the influence of loan information on loan interest rates through P2P. This study uses inferential research, namely 1 (one) sample consisting of individuals who are determined randomly from the population studied and numerical data collected from these samples, tested by statistical tests. The research results from the sample are generalized to the entire population studied.

Research Population

In this study, the population to be studied were investors who provided funding through P2P platforms registered with OJK for the period January to September 2022. The research subjects were taken from 2 (two) P2P platforms registered with OJK.

Research Sample

The sample in this study is funding transactions to borrowers through P2P platforms registered with OJK for the period January to September 2022 totaling <5% of transactions from 2 (two) P2P platforms registered with OJK.

Research variable

This study uses two types of variables, namely the dependent variable and the independent variable. The dependent variable consists of one variable, namely the decision to provide funding, while the independent variable consists of 7 variables as shown in the table below:

Independent Variable		Type	Description
X1	Age	numeric	The age of borrowers who get loans from P2P registered in Indonesia.
X2	Gender	Category	Gender of borrowers who get loans from P2P registered in Indonesia. 0 = Male 1 = Female
X3	Level of education	Category	The educational level of borrowers who get loans from P2P registered in Indonesia is categorized into 3 categories: SMP and below = 0 SMA = 1 University and above = 2
X4	Marital status	category	The marital status of borrowers who make loans via P2P is registered in Indonesia. Married = 0 Not married = 1
X5	Loan Limit	numeric	Number of loans made through P2P Registered in Indonesia.
X6	Time period	numeric	The term of the loan made through P2P is Registered in Indonesia.
X7	Platform Age	numeric	The age of the P2P platform registered in Indonesia.

Data analysis technique

This study uses multiple linear regression methods, namely to measure the correlation between the dependent variable and several independent variables. To model the input data set, the linear equation used is as follows:

$$Y_i = \beta_0 + \beta_1 Dem_i + \beta_2 X_i + u_i$$

Where:

Y is the dependent variable i.e. interest rate.

β is the representative regression coefficient.

X represents a financial proxy (interest rate, loan ceiling, term, and success rate of return).

Dem are the demographic variables of the respondent (age, gender, education level, and marital status) which are called independent variables, predictor variables, or explanatory variables because they have known values.

Table 1
Coefficient Result of Dependent Variable

Variable	Obs	Means	std. dev.	Min	Max
Solver id~a	716,660	810004810011	2.453761		
transaction id	0	1.78e+08	5.14e+08		1000002.00e+09
platform value	716,660	43.26425	16.46345	1	50
Loan term	716,660				
Birthdate	0				
Gender	0				
Education	0				
Marital status	0				

The minimum value of the loan ceiling taken is IDR 1000,000 (one million rupiah) with a maximum value of IDR 2,000,000,000 (two billion rupiah). The fastest loan term is 7 days and a maximum of 720 days (almost 2 years).

Table 2
Gender Variable Percentage

Gender	Freq	percent	Cum.
Man	104,017	5,46	42.99
Woman	1,086,326	57.01	100.00
Total	1,905,352	100.00	

From the data above it can be concluded that borrowers are dominated by female borrowers with a percentage of 57.01% with 1,086,326 borrowers. Then the legal entity borrowers came in second with a percentage of 37.53% with 715,009 legal entity borrowers. Then the remaining 5.46% with 104,017 borrowers were male borrowers.

Table 3
Percentage of Education Level Variables

Education	Freq	percent	Cum.
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Diploma	6,498	0.34	37.87
Doctor	11	0.00	37.87
Masters	540	0.02	37.90
SD	986,696	51.79	89.68
SENIOR HIGH SCHOOL	168,392	8.84	98.52
JUNIOR HIGH SCHOOL	8,762	0.46	98.98
Bachelor	19,427	1.02	100.00
No data	15	0.00	100.00
Total	1,905,352		

Leaving aside the number of legal entities as borrowers, the education level of borrowers is dominated by borrowers with elementary school (SD) educational backgrounds with a percentage of 51.79% or as many as 986,696 borrowers. Next are borrowers with high school education (SMA) with a percentage of 37.53% or a total of 168,393 borrowers.

RESULTS AND DISCUSSION

The analysis was carried out to find out how the relationship or influence is linearly between the independent variables in this case age, gender, education level, marital status, loan limit, loan term, platform age and TKB platform on the independent variable in this case is the interest rate. The steps taken in carrying out multiple linear analysis in this study are as follows:

The analysis was carried out to find out how the relationship or influence is linearly between the independent variables in this case age, gender, education level, marital status, loan limit, loan period, and platform age on the independent variable in this case is the interest rate. The statistical test results in this study are as follows:

Table 4
Statistical Test Results

flower	Coef.	St. Err.	t-value	p-[95% valuesConf	interval]	Sig
log_ceilingd	.08	.021	3.76	0	.038	.121 ***
log_funding	-.08	.021	-3.80	0	-.121	-.039 ***
jk_flower	16,919	3,254	5.20	0	10,539	23,298 ***
jk_loan	.05	.01	5.21	0	.031	.068 ***
age	0	0	1.94	.053	0	0 *
3	-17,814	3,293	-5.41	0	-24,269	-11,358 ***
status	-.019	.008	-2.37	.018	-.034	-.003 **
Constant	-17.05	3.34	-5.11	0	-23,597	-10,502 ***

Mean dependent var	0.346	SD dependent var	0.100
R-squared	0.691	Number of obs	3186
F-test	286.087	Prob > F	0.000
Akaike crit. (AIC)	-9360.155	Bayesian crit. (BIC)	-9311.623

*** $p < .01$, ** $p < .05$, * $p < .1$

Based on the calculation results above, it can be seen that if the coefficient has a positive sign, it means that the independent variable has a positive influence on the dependent variable, in this case the interest rate, namely the independent variable in the form of a loan ceiling, has a significant positive effect, namely the greater the loan ceiling, the interest rate also getting higher. The independent variable term of the loan also has a significant positive effect, that is, the longer the term of the loan, the higher the interest rate.

On the other hand, there are also variables that have a negative effect, namely the education level variable has a significant negative effect, which means that the higher the education level of the borrower, the lower the interest rate. The funding variable also has a negative effect, namely the higher the funding value, the lower the interest rate given. This also applies to marital status, which has a negative effect on interest rates.

The age variable does not have a significant or small effect on interest rates, that is, the age of young and old borrowers does not affect interest rates. This also applies to platform age which has no effect on interest rates.

CONCLUSION

In this research based on the calculation of the statistical method above, it can be concluded that several independent variables have a significant positive effect, some variables have a significant negative effect and some variables have no effect on interest rates. Based on the description above, investors can pay attention to information related to the loan ceiling amount and loan term which will affect the interest rate which can illustrate that the higher the interest rate, the higher the risk of default considering the large loan ceiling amount and long loan term. Long. Related to the variables of education level and marital status that have a negative influence, that is, the higher the level of education or the borrower who is married, the lower the interest rate.

Based on the results of the research above, it can be concluded that investors need to pay attention to loan ceiling information, loan term, education level, and marital status in making decisions on granting credit, this is to ensure investors can measure the risk they can accept by taking into account acceptable interest rates. .

This research has limitations where the platform age variable cannot be calculated regression because there are only 2 (two) platforms. However, it is hoped that this limitation will not affect the assessment carried out in this study, which is to measure the effect of loan information in the P2P platform on the interest rate on P2P loans.

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