

Factors determining default in P2P lending

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Abstract

The research documented in this paper examines multiple factors related to borrowers' default in peer-to-peer (P2P) lending in the United States. The empirical study is based on a total number of 1,863,585 loan records issued through LendingClub from 2007 to 2020Q3 and a logistic regression model is developed to predict loan defaults.

This study is motivated by the hypothesis that both P2P loan characteristics and macroeconomic variables have influence on loan performance. We define a set of loan characteristics, borrower characteristics and macroeconomic variables that are significant in determining the probability of default and should be taken into consideration when assessing credit risk.

Our results, in line with prior research, show that a number of borrower and contractual loan characteristics predict loan defaults such as loan credit grade, loan purpose, loan maturity, annual income and employment length.

The innovation of this study is the introduction of macroeconomic indicators to explain the defaults in P2P lending industry. The study indicates that macroeconomic variables assessed alongside loan data can significantly improve the forecasting performance of default model. Our general finding exhibit significant positive effect of unemployment rate and adverse effect of GDP growth rate on P2P loan default rates. The empirical results also demonstrate that higher percentage change in House Price Index, Consumer Sentiment Index and S&P500 Index is associated with a lower probability of delinquency.

Our results have important implications for investors for whom it is of great importance to know the determinants of borrowers' creditworthiness and loan performance when estimating the investment in a certain P2P loan. In addition, the forecasting performance of our model could be applied by authorities in order to deal with the credit risk in P2P lending and to prevent the effects of increasing defaults on the economy.

Keywords: P2P, marketplace lending, loan default, United States

JEL classification: G23, G28, G14, G20, O16, D14