The effect of economic uncertainty and credit risk on lending of banks listed on the Tehran Stock Exchange using the generalized method of moments (GMM)

Extended Abstract

Purpose

Today, banks play an important role in creating a connection between the real and monetary sectors of the economy, and by organizing receipts and payments and providing exchange facilities, they facilitate the expansion of markets, growth and prosperity of the economy. Economic uncertainty and credit risk are among the most important variables that can have a great impact on lending by banks and credit institutions. The purpose of this research is to investigate the effect of economic uncertainty and credit risk on the lending decisions of banks admitted to the Tehran Stock Exchange. The statistical sample of the research includes 10 public and private banks admitted to the Tehran Stock Exchange during the period from 2013 to 2022. The data were analyzed using unit root, kao and generalized method of moments (GMM) tests with the help of Eviews software. The results of the research showed that economic uncertainty had no significant effect on the lending behavior of banks and credit risk had a negative and significant effect on the lending behavior of banks. Economic uncertainty refers to uncertainty about future economic events. Early work by Knight (1921) described the consequences of uncertainty, and following the Great Depression, increased attention to the potentially harmful consequences of high uncertainty. Economic uncertainty led to the expansion of researchers' attention and efforts to investigate the importance of uncertainty and escape from the ambiguities caused by it(moradi, et.al, 2022). Due to the importance and effectiveness of economic uncertainty, extensive studies have focused on its measurement. A group of researchers have focused on the conditional fluctuations of variables as a substitute for uncertainty indicators, which in this group's approach, focus only on individual uncertainties of macroeconomic variables, such as uncertainty of inflation, exchange rate, interest rate, monetary growth and stock index.(Binder, 2017). This research examines the effect of economic uncertainty and credit risk on the lending decisions of banks based on the information of banks admitted to Tehran Stock Exchange and raises the question that economic uncertainty and What effect does credit risk have on the lending decisions of banks admitted to Tehran Stock Exchange?

Methodology

According to the research literature section and the purpose of the research on the effect of economic uncertainty and credit risk on bank lending, the following regression model was used.

ΔLog (BL) I, (t,t+1)=β0 + β1EU + β2CR,it + β3ROEit + β4MBit + β5SIZEit + εit

Dependent variable:

Logarithm of change in bank lending (BL): This variable is obtained from the difference between loans at time t and t+1. It is expected that the bank's lending behavior will change from time to time and from one bank to another according to the characteristic factors of the bank as well as macroeconomic factors.

Independent variable:

Economic uncertainty (EU): First, macroeconomic uncertainty vectors using the generalized conditional heterogeneous variance model (GARCH (-,-)) based on the equation of mean and conditional variance (separately for each variable), in the form of below equations are extracted;

$$Y_{it} = \emptyset_i + \gamma_i Y_{i,t-1} + \varepsilon_{it}$$

$$\sigma_{it}^2 = \omega_i + \alpha_i \varepsilon_{i,t-1} + \beta_i \sigma_{i,t-1}^2$$

Credit Risk (CR): Credit risk is the risk that arises from the default of the counterparty, or more generally, the risk that arises from a "credit event"(Gorton & Metrick, 2012).

Finding

In this study, Levin, Lin and Chu test, generalized Fisher- Dickey–Fuller test and Fisher-Phillips-Peron test were used to check the significance of the variables.

The results and examination of the calculated statistics values and their acceptance probability show that all the variables except economic uncertainty are at the level of significance and the variable of economic uncertainty is significant with one-time differentiation.

Based on the results of the Sargan Test, the null hypothesis that the residuals are correlated with the instrumental variables is rejected, therefore the instrumental variables used in the estimation of the model have the necessary validity; In other words, the results of the Sargan Test show that there is no relationship between the error components and the tools used in the estimation of the research model, and as a result, the validity of the results for interpretation is confirmed.

The results showed that the concentration of credit risk has a negative effect on the lending behavior of banks in such a way that with an increase of one unit in credit risk; Bank lending will decrease by 0.28% and considering that the significance level of the estimated coefficient is less than 0.05%;

Therefore, the influence of credit risk on the lending behavior of banks is statistically significant.

Conclusion

The results of the research showed that economic uncertainty had no significant effect on the lending behavior of banks, and credit risk had a negative and significant effect on the lending behavior of banks. The absence of a significant relationship between economic uncertainty and the lending behavior of banks can be related to the conventional mechanism of the country's banking system in the granting of facilities. The origin of the major part of banking facilities is related to the legal requirements and the mandatory structure of lending in Iran. According to the mentioned issue, economic instability cannot have a noticeable effect on the amount of lending by banks. Considering the significant relationship between credit risk and the lending behavior of banks, reduction and control of credit risk has been proposed as one of the effective factors in improving the process of granting credit and as a result in the performance of banks, and the main role in continuing to provide facilities, profitability and the survival of banks and financial institutions.