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Analysis Bank Loans Behaviour in Negative Economic Prediods: A Case Study in Turkish Banking System 2008-2016

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Extensive Summary

The main indicator of the level of economic development of countries depends on the existence of an effective financial system. The financial system, consisting of financial markets, financial institutions and financial instruments, fulfills the functions of increasing economic prosperity and efficiency with the help of these elements. Financial institutions, which are the basic elements of the financial system; bring together fund surplus and fund deficits economic agents by reducing the costs incurred due to transactions and asymetric information. Within the financial institutions, banking sector is the one that performs the responsibilities atributed to them effectively compared to other institutions. Today, especially in Turkey, the banking system determines the volume and depth of financial transactions, fulfills financial intermediary functions and helps to create wealth. The regulation of the activities of banks with rights that should belong to the public sector is very important in terms of the protection of the rights of financial actors but also the healthy functioning of the entire banking, financial system and economy.

The most basic activities of the banks are to fulfill the financial intermediation functions. While performing this functions, the credits they supplied to sectors need it, are used to maximize their profits as a business while ensuring efficient allocation of resources into the economy. Credits are accepted as indicative of financial development, as savings enable credits to be used as a means of exchange for money in the economy. When economic indicators of developed countries are examined, it is seen that the households, businesses and other financial actors in the financial market are financed by bank loans. Bank credits contribute to economic growth by contributing to the effective allocation of savings, by transferring savings to investments, by reducing asymetric information, by lowering transaction costs and by ensuring that financial transactions are properly realized.

When the banking sector in the world is examined, the size and significance of the loans among the assets would be better understood. The average asset size of developed countries is about nine trillion dollars, and around a trillion dollars in developing countries. Within this asset size, loans make up the 50% of the developed countries', while in developing countries, these loans make up 60% of the asset size.

Credit extension decisions made by banks that have reached this size have become a very important issue in terms of explaining the causes and repercussions of the ongoing global financial crisis, especially in the global scale, and in reestablishing a sound financial structure. Credit size is an important factor in the economic growth process when credit facilities are shrinking in the crisis period, as when the access to finance becomes difficult, the risks of bankruptcy are aroused and the risks of non-performing credits during the adverse economic periods are taken into consideration. Credits that have shrink in adverse economic times cause the macroeconomic indicators to worsen further. The difficulties experienced in the supply of credits during the crisis periods deepen the scale of the crises by negatively affecting the productivity of the enterprises and the access to financing.

Negative economic periods are expressed as situations where perceptions and anticipations deteriorate by the participants in the market, while there is absence of stagnation and crisis in the current micro and macro conditions. In these cases, bank lending behaviors are differentiated. In other words, in the adverse economic conditions, market participant could not be able to meet their funding needs.

Under this circumstance, understanding of bank lending behavior in adverse economic periods is a matter of considerable economic and commercial importance for both financial sector and customers of financial services. Understanding how the adverse economic periods affect the real sector, the financial sector and the individual sector influences both micro and macro planning and decisions.

The banking sector, particularly in Turkish economy, represents about 80% of the financial sector and plays a critical role as a major thrust in resource allocation. Determining the lending behaviors of banks, especially in adverse economic conditions, is important for both the economic growth, the financial health of banks and public sector economic planning and policy development.

In this study, "adverse economic periods" in Turkish economy between 2008 - 2016 on the basis of data collected from the expectations survey by Central Bank of Turkey, will be determined. Within the scope of these expectation indices, three main index analyzes will be included in accordance with the literature. These are: (1) Economic Confidence Index (2) Real Sector Confidence Index and (3) Consumer Confidence Index. When the critical thresholds in these indices are exceeded, the effects on the lending behavior of the banks will be revealed by matching the changes in the main credit items of the banks, the changes in their financial performance and other expectations.

In the study, financial system and elements in general, adverse economic periods, financial regulations and banking definition, credits and lending behavior were examined in detail. Finally, the impact of adverse economic conditions on banks' lending behavior based on expectation indices was measured using dynamic panel data analysis. Six deposit banks registered in the stock exchange in Istanbul (ISE) according to certain size and partnership structure constituted the sample group of the research.

The study was conducted on the basis of data obtained from publicly disclosed financial statements and reports prepared within the framework of Capital Markets Board (CMB) and BRSA regulations.

This study is different from the previous researches, in the sense that six deposit banks registered in Istanbul Stock Exchange were examined by choosing according to certain size and partnership structure. Examining the relationship between bank lending behavior with the expectations index is the first in Turkey. Descriptive statistics of dependent and independent variables were calculated in parallel with prior studies. Dynamic panel data analysis was also applied in parallel with others.

To determine the relationship between bank lending behavior in adverse economic periods in the study, the change in lending is the dependent variable; (ROA), capital adequacy ratio, equity / total assets ratio, liquid assets / short term liabilities ratio, liquid assets / total assets, total lending / total assets, total lending / total deposits, loans / total assets, total assets, non-interest income / total assets, interest rates, gross domestic product independent variable; consumer confidence index, real sector expectation index, and economic confidence index are added as dummy (dummy variable, shadow variable) variables. To calculate the dummy variables, the average of all moths covering the years 2008-2016 were taken, the ones below the average were identified as negative and were defined as “1” whereas the ones which were equal or higher were considered as normal and were defined as “0” in the analysis.

In this study, dynamic panel data analysis has been used to measure the relationship between adverse economic conditions and bank lending behavior. Dynamic panel data model measures the effect of the dependent variable in the previous period on the dependent variable in the current period. Unlike static panel data models, dynamic panel data models include delayed variable or variables. Among the factors that affect dependent variables are delayed values of independent variable or variables as well as delayed values of dependent variables. These models are defined as "dynamic models".

The dynamic panel data analysis in the study was first applied to the total lending change dependent variable. Total lending dependent variable, total lending / total lending ratio and Total Assets were found to be variables explaining the highest level of significance (P = 0.000). The coefficients of Total Assets and Total Loans / Total Assets in the equation are 2.72% and 0.0004289 respectively; ROA (P = 0.000) at significance level -0.001448; GDP (P = 0.008) at significance level 0.0089913; 0.0001132 in significance level of Liquid Assets / Total Assets (P = 0.008); SYO (P = 0.078) was found to have an effect on total loans as 0.0004535 at significance level.