

## **The Effects of Macro Economic Factors to Banking Sector Returns: Borsa Istanbul Case**

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### **Extensive Summary**

#### **Introduction**

In all stages that located in the commercial life, persons or actors do the same functions have always been even they are not called bank. In this sense the development and growth of commerce has benefited much more banking system development. Parallel to the development of commercial life. The significance of banks gradually increased and increasing significance causes an increase in the number of the banks.

Today, improvements in technology and abolition of the borders, our world become a huge village. Banks are changed to an investment which is conspicuous for investors via stock exchanges. Therefore, banking sector developed critically and it's domain increased.

The trend of increasing development of banking sector, has made banking returns significant. Banking sector returns are not only concern about bank owners. These returns also concern about investors that will buy or already bought bank shares. Beside that banks are increasingly become a part of commercial life which have variable returns. Because of that the effects that affecting banking sector returns portfolio are increased. One of these factors is macro economic factors. In this sense, in this study it's focused that the macro economic factors effect banking sector returns in Turkey. Accordingly, the aim of the study to reveal the macro economic factors that effects BIST 10 banking return index which is composed trading securities in Borsa Istanbul and to specify that the effects how and in what direction.

#### **Method**

In this study, in order to attain our object two basic analysis method is used. In this context, firstly, correlation analysis is performed to specify the degree of the

relation between dependent and independent variables and to examine whether there is high correlation that cause multicollinearity between independent variables. Afterwards, in accordance with the hypothesis of the study, macro economic factors that effects BIST 10 banking return index are analyzed with multiple linear regression model.

Similar studies are used while creating the data set that is used in this study. In this context, BIST 10 banking return index used as dependent variable. BIST 10 banking return index comprises the biggest ten banks stocks in Turkey and is calculated since January 2010. BIST 100 return index, CPI (Consumer Price Index), interest rate, money supply, exchange rate, industrial production index, gold price, export unit value index, unemployment rate are used as independent variables. All variables are used per month. In this regard, January 2010 – July 2014 period data set are used in this study. Hypothesis generated in this study are;

**Hypothesis 1:** Changes in BIST 100 return index effects BIST 10 bank return index.

**Hypothesis 2:** Changes in CPI effects BIST 10 bank return index.

**Hypothesis 3:** Changes in interest rate effects BIST 10 bank return index.

**Hypothesis 4:** Changes in money supply effects BIST 10 bank return index.

**Hypothesis 5:** Changes in exchange rate effects BIST 10 bank return index.

**Hypothesis 6:** Changes in industrial production index effects BIST 10 bank return index.

**Hypothesis 7:** Changes in gold price effects BIST 10 bank return index.

**Hypothesis 8:** Changes in export unit value index effects BIST 10 bank return index.

**Hypothesis 9:** Changes in unemployment rate effects BIST 10 bank return index.,

### **Findings and Conclusion**

Firstly, correlation analysis is performed between independent variables to see whether multiple linear connection problem. According to the results of correlation analysis between independent variables is observed that no multiple linear connection is exist. After that multiple linear regression analysis is performed. Seeing that the analysis autocorrelation problem is observed. Thereby, autocorrelation problem is solved by using cochrane-orkut-prais-winsten conversion to the model. Associated with the autocorrelation problem solution, multiple linear regression analysis is performed again. Model R-squared is realized at 0.9389. Considering the F value whether regression model completely meaningful,  $p = 0.0000$  ( $p < 0.05$ ) F statisticis significant. That model is significant at all levels as a whole. Looking at the t statistics, BIST 100 return index and M1 money supply are significant at level %1; industrial production index is significant at level %5; export unit value index is significant at level %10. The remaining five variables are insignificant. The constant term in model is significant at %10. According to results of t statistics, hypothesis 1, hypothesis 4, hypothesis 6 and hypothesis 8 are accepted. The remaining hypothesis; hypothesis 2, hypothesis 3, hypothesis 5, hypothesis 7 and hypothesis 9 are denied.