

Preface

There are eight different chapters in this book. In the first chapter, the mechanism of the financial system is defined. Within this scope, fund demanders, fund suppliers and financial instruments are defined. In the second chapter, financial intermediaries are identified. In this framework, necessary information is given related to the banks and nonbanking financial institutions.

In the third chapter, the role of the central banks in the financial system is discussed. In this framework, necessary information is given related to the need for the central bank, the subject of central bank independence and analytical balance sheet of the central bank. On the other hand, the fourth chapter includes monetary policy operations of the central banks. In this context, first of all, monetary policy instruments of the central banks are defined that are required reserve ratio, rediscount rate, open market operations, standing facilities and asset purchase program. In addition to them, monetary policies of E7 economies are also identified. For this purpose, some macroeconomic information of these countries is also shared.

In the fifth chapter, data and methodology are defined. In this framework, methodological information for fuzzy DEMATEL, fuzzy TOPSIS, fuzzy VIKOR, Kao panel cointegration, Pedroni panel cointegration and Dumitrescu Hurlin panel causality analyses is given. In addition to them, the sixth chapter includes the application related to the effectiveness of the central bank policies is measured with the help of fuzzy logic. In this context, five different monetary policy instruments are defined as the criteria. In addition to them, E7 countries are selected as the alternatives. Fuzzy DEMATEL methodology is taken into consideration to weight the criteria according to their importance. Furthermore, fuzzy TOPSIS and fuzzy VIKOR approaches are used in order to rank the alternatives related to the monetary policy effectiveness.

In the sixth chapter, it is aimed to understand whether central banks of E7 economies implement effective monetary policies or not. The main difference of this study in comparison with the previous one is that Kao panel cointegration, Pedroni panel cointegration and Dumitrescu Hurlin panel causality analyses are considered in the analysis process. Two different variables are selected for this purpose. Central bank interest rates represent the monetary policies whereas inflation rate gives information about the purpose of these central banks.

In the last chapter, independence of the central banks in E7 countries is evaluated. In this framework, 5 different criteria are defined for the independence of the central banks with the help of detailed literature review. In addition to this issue, E7 countries are chosen as the alternatives. These criteria are weighted with the help of fuzzy DEMATEL approach. On the other side, fuzzy TOPSIS and fuzzy VIKOR methods are taken into consideration so as to rank E7 countries. By using two different methodology for this purpose, it is aimed to make a comparative analysis.

This book has some significant novelties in comparison with similar books. Most of the books related to the central bank application do not have an analysis part. However, in this book three different analyses are performed in addition to the theoretical information. Another important novelty is that two analyses are made by using fuzzy logic and one analysis is performed with econometric models. Therefore, it shows that analyses are made by considering both expert opinions and quantitative information. Additionally, effectiveness of the monetary policies and independence of the E7 economies are firstly discusses by using fuzzy logic and econometric methods in this book.

In addition to these items, in this book, some important analysis results and recommendations are presented. It is believed that they are very helpful for academicians and practitioners in the market. By considering these results and recommendations, significant strategies can be developed to have more effective central bank and financial system. Therefore, it can be possible improve macroeconomic conditions of these countries. Hence, it is thought that this book makes important contribution to the literature.

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Target Audience and potential users of this book are defined below.

- Researchers
- Academicians
- Policy Makers
- Government Officials
- Upright Students in the concerned fields
- Members of Chambers of Commerce and Industry
- Top managers of the companies

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