

# Chapter 97

## A Strategic Approach to Global Financial Crisis in Banking Sector: A Critical Appraisal of Banking Strategies Using Fuzzy ANP and Fuzzy Topsis Methods

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### **ABSTRACT**

*Financial crisis affected many people and companies in the world negatively in terms of job loss and bankruptcy. Owing to this aspect, today many banks developed strategies in order to minimize the effects of any potential crisis which might be occurred in the future. Present study aims to evaluate the strategies of Turkish banks to minimize the effects of financial crisis by using fuzzy ANP and fuzzy TOPSIS methods. The study identifies that capital injection is the most significant strategy whereas the strategy of decreasing interest rate has the weakest importance. In addition to this aspect, it was also determined that privately-owned banks are the most successful banking group of Turkey with respect to the achievement of strategic goals during a financial crisis. On the other hand, state-owned banks have the lowest degree regarding this concept. The study recommends that Turkish banks should mainly focus on increasing capital amount in order to minimize the negative aspects of the crisis*

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## **1. INTRODUCTION**

Banking sector put the groups of people who have savings and need funds to make investment together (Freixas & Rochet, 2008). Owing to the banks, the savers in the country can gain interest income from their savings. In addition to this advantage, investors have a chance to access the funds that are necessary to have an investment. By considering these issues, it can be said that banks play a vital role in order to improve the economy of the country (Santomero, 1997). That is to say, any problems related to banking sector may cause significant problems for that country.

Especially after globalization, the borders among countries disappeared. Because of this situation, banks had a chance to make operations all around the world (Berger et. al., 2000). In spite of this advantage, there was also increase in the risks of the banks. This means that banks have to manage not only the risks in the country but also the volatility in international markets (Prasad et. al., 2005). For instance, banks have to take actions against the extraordinary changes in currency rates and interest rates in the world.

In the last decades, it was seen that some banks could not manage this type of risks in some countries. Due to this situation, many banking crises were occurred in some different countries. For example, in 1997, many Southeast Asian countries had banking crisis because of not managing currency risk. In addition to this crisis, a banking crisis was also occurred in Mexico due to the high credit risk of the banks (Yüksel, 2016). Moreover, high inflation rates led to a banking crisis in Argentina in 2001 (Graham & Masson, 2003). Furthermore, global banking crisis, occurred in United States in 2008, also showed the importance of credit and market risk (Demyanyk & VanHemert, 2011).

Banking crisis caused many losses in both banking sector and also in the economies of these countries. A lot of people lost their jobs and many companies went bankruptcy in this period. In addition to these problems, GDPs of the countries decreased very much owing to the banking crisis (Yüksel, 2016). Additionally, investments and consumptions almost stopped in the crisis period. Because of this aspect, it was understood that risk management in banking sector is essential so as to prevent the substantial damages in the economy.

Owing to these aspects, it is obvious that determining significant strategy in order to minimize the risk of banking crisis is very important. Within this context, many countries try to implement a strategy in order to identify the early warning signals of the financial crisis. In other words, these countries aimed to predict any financial crisis before it was occurred. Due to this condition, it can be said that studies related to define appropriate strategy play a significant role.

While considering the issues emphasized above, in this study, it was aimed to identify appropriate strategies of Turkish banks in order to prevent the negative effects of the financial crisis. Within this scope, fuzzy ANP and fuzzy TOPSIS methods will be used in order to achieve this objective. As a result of the analysis, it will be possible to understand the performance of foreign, state and private banks of Turkey regarding strategies to prevent financial crisis. Because of this situation, it can be said that this study makes a significant contribution to the literature by helping to solve this important problem by using an original method.

The paper is organized as follows. Following the introduction, we provide information about the details of the financial crisis. In this section, some studies in the literature related to financial crisis will be emphasized. Also, in the third section, we explain the strategies in banking sector during the global financial crisis. In addition to these sections, the fourth section gives information about fuzzy ANP and fuzzy TOPSIS methods. Moreover, it includes research and application to understand the performance of the banking groups in Turkey. Finally, the results of the analysis were given at conclusion.

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