Evaluation Of Turkish Insurance Sector In Non-Life Insurance With Data Envelopment Analysis

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Extensive Summary

Introduction

By the fact of the globalization, competition in financial markets forces the stakeholders to use their resources more effectively. It is of great importance that the corporations have to evaluate their performances on competitively prized markets through the indicators, such as profitability, growth rates, efficiency and productivity. Therefore, the ability of self- determining the relative efficiency of companies within the rivalry has become extremely important in generating prospective strategies and managing their risks. In financial markets, financial ratios are the most used performance indicators where performance results are evaluated in terms of efficiency.

Methodology

In this study, it was aimed to determine the efficiency levels of the insurance companies in elementary branches in the last three years period with Data Envelopment Analysis (DEA). DEA, as a linear programming based method, is known as a nonparametric efficiency measurement method that evaluates the relative activities of decision units producing outputs with similar inputs. Financial and non-financial indicators within the related literature were used in the study. The established model which is based on a variable return-based assumption, Banker-Charnes-Cooper (BCC) model, was solved by the DEA-SOLVER program.

Findings

When the analysis results are evaluated, it is seen that 12 insurance companies, 13 insurance companies and 5 insurance companies are efficient, respectively in 2014, 2015, 2016. Additionally, it is found that the regulations on traffic insurances in 2016 will be efficient in the decrease in the number of effective companies. Besides, 41% of insurance companies that serve in non-life branches in 2014, 48% in 2015 and 19% in 2016 were found to be efficient. As a result of the analysis, it is found that ZIRAAT Insurance has been defined as reference companies 19 times; ANADOLU Insurance as 13 times as reference companies and ALLIANZ Insurance 10 times as reference

companies, particularly in the year of 2016. It is seen that AXA and DUBAI STAR insurance companies are included only once in the reference group, with the exception that the companies in the reference clusters are efficient companies.

Discussion

When the potential improvement rates of the sector are evaluated in general, it is seen that sector has been efficient in compensation payments, in the year of 2016. The findings illustrate that; total premium production is inadequate, premium production should be increased, the periodic profit / loss ratio has reached to the level that the sector is efficient yet it still has to produce the increased-targeted strategies. Besides, the results show that, the industry has caught the efficiency in compensation payments. This meets the satisfaction and expectations of the customers. Therefore, this result makes a positive contribution to the performance of the companies on the dimension of portfolio sustainability. However, the inadequacy of total premium production and the low sales channels are affecting the performance of companies negatively. Therefore, raising the quality of sales channels can lead to an increase in overall premium production, which will in turn affect the performance of the companies. It is envisaged that the increase in total premium production will also improve the profit and loss criterion by indirectly taking into account the increase in the performance of the companies and the sector.