Chapter 12

A Comparative Hybrid Method in Technical Analysis for Stock Selection Process in Banking Sector by Fuzzy AHP–Topsis and Vikor Method

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ABSTRACT

The decision-making process on the stock requires the comprehensive analysis of both the fundamental and technical methods for the professionals invested in capital markets. Timing is an important issue of investment to profit from the capital markets. Thus, technical analysis based on the behavior of the investors and the timing as well as fundamental analysis to select the right securities are considered by the majority for stock selection. The purpose of the study is to uncover the performance results of the stocks in the banking sector by the main technical analysis indicators with comparative ranking methods under fuzzy environment.

INTRODUCTION

The decision of the majority on stock selection mostly reflects in the charts of the stocks and investors tend to be buyer or seller and according to the patterns of the market and stocks with the flourishing trend. However, the professionals as a majority make their investment decisions with economy and firm-based parameters and they use the historical data of the stocks on the side.

Technical analysis is one of the well-known market trend predictors by the investors and academicians. The information on stocks and macroeconomic parameters as well as the price changing in the market trend are frequently considered during the decision making process on the selling and buying of the securities. However, to reach the information from the company insiders...

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isn’t easy and mostly open to manipulation on the side. Moreover, to generate the returns are higher than the market average is impossible according to the efficient market hypothesis. The performance of the Stock market is based on past and current price changings, future expectations such as the predictable behavior of market participants and relations between global financial markets over time (Kahn, 2006; Romeu and Serajuddin, 2001; Kirkpatrick and Dahlquist, 2007).

The knowledge-based competitive environment requires the getting more relative information and strong prediction than minority investors’ own. However, to profit from the market trade, the most of the investors must trade in the same way with the related information in time. For instance, if the traders of the bull market are the majority in the stock market, it is assumed that the rising trend may go on at least in the short time. Thus, investors with this expectation can profit from the stock market at the average level. One of the most important point of the profitable decision making process is to be able to make a same decision with the majority of the market in time or before them (Schannep, 2008).

Reactions of the market participants in same ways construct significantly the patterns and indicators of the technical analysis. So, followers to market make a decision on timing of stocks according to these signals. As a result, analyzing the patterns and indicators of technical analysis with confirmatory signals and finding out the timing and direction of the majority are fundamental issues on the technical analysis.

In this study, decision making process on stock selection is limited with technical analysis indicators and decision makers are expert in technical analysis, stock markets and academicians have been appointed to determine the relative priorities of the alternatives and parameters with the main technical analysis indicators in the fuzzy environment, the performance results of the study have been discussed with comparative analysis methods.

**LITERATURE REVIEW**

Even if there are a lot of studies on the technical analysis, the most of the researches mainly focus on the limited issues of the analysis. In 1700s, first speculative movements on the basis of the candlestick patterns were seen in Japan rice market. In 1880s, the Dow Theory established by Charles Dow in the United States introduced the main pillars of the technical analysis. Cowles conducted one of the first studies regarding the technical analysis in 1933. The consecutive studies on the technical analysis have been flourishing on the basic issues of technical analysis by the 1960s. After the 1970s, the empirical studies have been located at the prominent level. However, the recent studies have been generally based on the more complex problems by the 1990s (Zhu and Zhou, 2009).

The major studies on the technical analysis strategies in international capital markets have been conducted 1960s to the present. However, the foreign exchange market has been frequently utilized in the trading strategies for technical analysis. A number of the studies demonstrate that arbitrage-based strategies are mostly the well-known arguments in the emerging economies. Especially, technology firms including media and telecommunication as well as firms in the creative economy are the focal point of researches on technical analysis (Sadorsky, 2003; Shynkevich, 2012). Some of the recent subjects on technical analysis can be summarized as follows:

Regarding to the behavioral finance, Menkhoff (2010) declares the psychological influences over the financial market professionals by the survey results from fund managers. Zielonka (2004) finds out the popularity of technical analysis is firmly related to the typical cognitive biases of humans. Wang et al. (2011) notice order imbalance and the heterogeneity in behaviors of the investors.

In the literature on the trading and principles of technical analysis, Marshall et al. (2008) investigate that the market participants take into
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