Scientific Abstract

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Changes in Execution Probability Function Over the Recent Decade:

Evidence from the Tel Aviv Stock Exchange

Over the past decade, the Tel Aviv Stock Exchange (TASE) has introduced several structural amendments. Of interest is the question of whether investments actually improve the trading mechanisms. In keeping with market microstructure research, we will investigate how the relationship between execution probability and the order price has changed over different trading environments.

The main objective of this research is to characterize the sale and buy probability function of different financial assets traded on the TASE. By examining documentation of the sale and buy orders that were fulfilled, partially fulfilled or not fulfilled at all over the past ten years, we will attempt to define the relationships between the sale probability and the level of the sale or buy order prices for given market conditions. Moreover, we will analyze the indicators that affect execution probabilities in foreign exchange markets, such as the London Stock Exchange and the New York Stock Exchange.

In this research, we apply neural network architectures, and construct a feed-forward neural network (FNN) based on fundamental analysis in order to classify stocks according to tendency prediction. Further, we estimate an execution probability function based on this prediction combined with financial and market indicators.