

模糊时间数列的分析与预测:以台湾地区加权股价指数为例

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摘要 随着我国经济快速成长, 衍生性金融商品的投资分析, 已成为国内财务数学研究热门课题。以股票市场而言, 人们总希望比别人早一步掌握行情的脉动, 以获取最高的报酬率, 然而, 影响股市加权股价指数波动的因素众多, 要如何进行趋势分析与预测, 是很多学者相当感兴趣与研究的主题。本文考虑以模糊统计方法, 作模糊时间数列的趋势分析与预测。其望应用模糊统计分析方法比传统的时间数列分析方法能得到更合理的解释, 且预测结果可以提供决策者更多的信息, 做出正确的决策。最后以台湾地区加权股票指数为例, 做一实证上的详细探讨。

关键词 [模糊时间数列,预测,台湾加权股价指数](#)

分类号

FUZZY TIME SERIES ANALYSIS AND FORECASTING: WITH AN EXAMPLE TO TAIWAN WEIGHTED STOCK INDEX

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Abstract In recent years, along with the advance of technology and industry, the innovation and improvement of forecasting techniques have caught more and more attention. Especially, in the issues of financial engineering, economic development, population policy, and management planning and control, forecasting provides indispensable information in decision-making process. Regarding stock market as an example, the essence of closing price is uncertain and indistinct. Therefore, if we merely consider closing price of yesterday to build our forecasting model, not only will we misestimate the future trend, but also we will suffer unnecessary loss. Based on this reason, in this research we propose an integrated procedure for fuzzy time series modeling and forecasting through fuzzy relation equations. We apply this technique to construct a fuzzy time series model for Taiwan Weighted Stock Index and forecast trend while comparing the forecasting performance by average forecasting accuracy. We strongly believe that this model will be profound of meaning in forecasting future trend of financial market.

Key words [Fuzzy time series](#) [forecasting](#) [Taiwan weighted stock index](#)

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