**TESEARCH ON METHANOL FUTURES PRICE FORECAST AND TRADING STRATEGY BASED ON RANDOM FOREST METHOD**

LIN Jie JI Chenyang

（School of Economics & Management, Tongji University, Shanghai 200092,China）

**Abstract:** With the gradual improvement of my country’s energy structure, methanol as a new type of clean energy has received widespread attention. Methanol futures products have been on the market for nearly 10 years, but there are still few studies on methanol futures prices. Forecast models and trading rules for futures prices. The basic idea is: construct a methanol futures price prediction model based on the random forest algorithm, use the fundamental characteristics of the upstream and downstream products of the methanol industry chain as input variables, and standardize the input variables to construct a control model, combine the use of Aberration-based trading strategies, and use Sharp The ratio screens the trading strategies and constructs an effective quantitative trading model of methanol futures. The research results show that when the methanol futures price prediction model is constructed using the above method, it can achieve a conservative annualized yield that is more than twice the yield of the 10-year Treasury bond in the same period while ensuring the generalization ability of the trading strategy. This shows that the use of the fundamental characteristics data of the upstream and downstream products of the methanol industry chain can well explain the methanol futures price, and the trading rules based on the Aberration trading strategy thought combined with the Sharpe ratio screening can construct an effective methanol futures quantitative investment model.

**Keywords:** methanol futures, price prediction, random forest, strategy generalization