Trading SET50 Index Future with Kalman Filtering

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ABSTRACT

We present a trading algorithm that has been legendary used in an engineer field for tracking a location of an object in uncertain environment with a feature of recursive prediction-correction mechanism. This excellent property of Kalman Filter is able to cope with the erratic arrival of observation both in tracking an object and in price movement. Combining Kalman Filter with pricing relationship model estimation brings us to a robust model for projecting a price movement. The recursive Kalman Filter algorithm adjusts the pricing relationship model in every time step to increase and decrease the influence of each variable in the forecasting model. This filter produces estimates the impact of each driving factors to increase an efficiency of an algorithm for every time the new information entered. This mechanism initially came into finance through assessing a commodity price movement, and we believe it is applicable for stock markets as well.