馬可夫轉換波動度估計與台指選擇權操作策略績效

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摘　要

　　本研究以台指選擇權為投資標的物，研究期間為 2000 年 1 月 19 日至 2009 年 12 月 31 日，透過馬可夫轉換模型以最大概似法估計台灣股價指數在低波動度的機率，之後藉由馬可夫轉換預期的波動度進行 11 種選擇權策略實證買賣，績效結果顯示有搭配停損停利機制策略中，勒式策略報酬勝過於跨式策略報酬，將其歸因於勒式策略履約價格買於價外，跨式策略履約價買於價平，使得跨式策略所需承擔成本較高。以點數計算獲利的策略中，由於兀鷹策略跨越的履約價區間大於蝶式策略，使得平均而言蝶式策略獲利點數優於兀鷹策略。

關鍵字：馬可夫轉換、選擇權策略、台指選擇權

Markov-Switching Volatility Estimation and
the Performance of Option Strategies

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ABSTRACT

In this study, we apply the data of TXO and estimate the probability in the low volatility of Taiwan Stock Exchange Capitalization Weighted Stock Index through using maximum likelihood method of Markov-Switching model. Afterward, we exercise with 11 kinds of Option strategies to trade by employing the expected volatility of Markov-switching. The results of the performance show that the Strangle strategy is better than the Straddle strategy while the strategies have stop-profit and stop-loss mechanism. We attribute the Straddle strategy is costly to the two strategies have different strike prices. When the strategies' profit is calculated by points, owing to the strike price interval of the Condor strategy is greater than the Butterfly strategy, on average, the profit of the Butterfly strategy is superior to the Condor strategy.

Keywords: Markov-Switching, Option Strategy, TXO

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