# 複製性賣權策略績效與變異數估計：以臺灣股市為例

# Evaluating the Performance of a Synthetic Put Strategy with Alternative Volatility Forecasts: The Case of Taiwan

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## 摘 要

本研究探討臺灣股市執行複製性賣權投資組合保險策略的績效。研究方法使用重抽樣技術，從臺灣股市報酬率歷史資料模擬出所需報酬率序列。複製性賣權保險策略的股價變動性預測，分別利用一般化自我迴歸條件化異質變異數法（GARCH）及移動平均法（Moving Average）來估計。模擬研究結果顯示，以GARCH方法預測股價變動性的複製性賣權投資組合保險策略績效，較以MA方法的績效佳。換言之，GARCH投資組合保險策略所保有上方獲利較MA投資組合保險策略高。而GARCH投資組合保險策略鎖定下方風險的能力也較MA投資組合保險策略佳。敏感度分析顯示，當無風險利率低，交易成本微少，要保額度高，或市場波動性大時，精確的股價波動性預測益形重要。

## Abstract

This paper evaluates the performance of synthetic put portfolio insurance strategies on the Taiwan Stock Market, in which volatility is forecasted with alternative models. The resampling technique is employed to simulate the return series from empirical return distributions. The results show that the synthetic put strategies with GARCH specifications (where volatility is forecasted with generalized autoregressive conditional heteroscedasticity models, GARCH) have better ability to reduce the downside risk and retain upward gains than those with MA specifications (where volatility is forecasted with moving average models) in most cases. The difference of upward gains retained between GARCH specifications and MA specifications becomes more pronounced when the risk-free rate is relatively low, the floor value insured is relatively high, the transaction cost is relatively low, and the market is more volatile. Results based on actual return data from the Taiwan Stock Market from 1981 to 1992 show that GARCH specifications overwhelm MA specifications in reducing the downside risks and retaining the upward gains in most cases.

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