

# 考慮交易成本的選擇權交易策略

陳明瑩

## 摘要

投資者面對到期日相同的一序列不同履約價格的選擇權，已有許多文獻提出如何建立選擇權最佳投資組合，但模型中均未考慮交易成本。選擇權在實際市場的交易過程中，投資者所支付的手續費與賦稅即為選擇權的交易成本。本論文針對買賣到期日相同但不同履約價格的買權與賣權如何組合，提出考慮交易成本的整數線性規劃模型，建立選擇權最佳交易策略。我們不考慮股價變動的機率分配型態，延伸楊靜宜 (2004)所建立之整數線性規劃模型和 Liu 與 Liu (2006)的大中取小模型，建構考慮比例制、固定制與混合制交易成本之整數線性規劃模型。最後，我們以台指選擇權(TXO)為例，驗證模型的效能。

**關鍵字：**交易成本，選擇權交易策略，整數線性規劃，選擇權套利機會。

# Option Trading Strategies with Transaction Costs

Ming-Ying Chen

## ABSTRACT

There are many researchers focus on constructing the optimal strategies and propose integer linear programming (ILP) for a series of options which are on the same maturity date with different strike price, but they neglect transaction costs in their models. The transaction costs of options are the handling charge and taxes which investors should pay for trading in the market. The thesis proposes an ILP with transaction costs to construct the optimal strategy for an option portfolio of call- and put- options on the same maturity date with different strike price. We leave the distribution of the variety of stock price out of consideration and extend Yang's (2004) model and Liu & Liu's (2006) min-max regret model to construct ILP with proportional, fixed, and mixed transaction costs. Finally, we take the trading data of TXO as an empirical study to test and verify the efficiency of our models.

**Key words:** transaction costs, option trading strategies, integer linear programming, option arbitrage opportunities.