

<b>題目</b>	台指現貨、ETFs 與台指期貨避險比率與避險績效之研究
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<b>摘要</b>	<p>本研究以標準差(SD)、左尾部分動差(LPM)、風險值(VaR)、極端風險值(ES) 四種風險指標，形成 MV(Minimum Variance)、LPM、VaR、ES 四種避險策略，利用移動視窗(Moving Window)的方式，以台灣股價指數期貨對於台灣加權股價指數、小型台灣股價指數期貨、台灣五十指數及 ETF 進行避險，並以標準差降幅率(HE 1)、左尾部分動差降幅率(HE 2)、風險值降幅率(HE 3)、極端風險值降幅率(HE 4)，共四種績效指標衡量避險績效，實證結果如下：</p> <p>1、 在最適比險比率之比較結果，當估計期固定，隨避險期增加，台灣股價指數現貨期貨避險後期、小型台指現貨期貨其避險比率大部份的資料期間呈現下降的現象。而台股五十指數現貨期貨皆呈現當估計期固定，隨避險期增加，其避險比率反而略微上升的現象。</p> <p>2、 在避險成本方面，以台灣股價指數現貨期貨最適避險比率略高於台灣股價指數現貨與小型台灣股價指數期貨最適避險比率，結果顯示台股股價指數期貨的歷史波動性高於小型台灣股價指數期貨的歷史波動性，因此可能需要較高的避險成本才能規避風險。以台灣五十指數現貨期貨最適避險比率略高於 ETF、期貨最適避險比率結果顯示台股五十指數的歷史波動性高於 ETF 的歷史波動性，因此可能需要較高的避險成本才能規避風險，也因為 ETF 是目前市場上買的到的現貨標的，實務上較容易建構避險的投資組合。</p> <p>3、 在歷史資料法下，MV 避險策略表現皆最為優異，且在後期中較為顯著，其次，績效表現大致依序為 LPM、VaR、ES 避險策略。就 HE 1 至 HE 4 而言，MV 避險策略皆最為優異，其次績效表現大致依序為 LPM、VaR、ES 避險策略。</p> <p>4、在實務中，MV 避險策略的成本仍高於 ES 避險策略及 LPM 避險策略。因此，對於投資人而言，應該在避險成本與避險績效中根據其所重視的部分取捨，方能使其投資效用達到最高。</p>
<b>關鍵字</b>	避險比率、避險績效、交易所基金
<b>Title</b>	A Study of Optimal Hedge Ratio And Hedge Performance for Taiwan Stock Index Futures
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<b>Abstract</b>	<p>The purpose of the thesis is to examine the hedging ratios and the efficiency of stock index futures for Taiwan Stock Market. The stock index data consist of TAIEX, TSEC Taiwan50 index, and ETF. The stock index futures contracts include TX, MTX, and T5F. With the objective in maximizing investors' expected utilities and minimizing investors' portfolio risks; this study used four models, Minimum Variance(MV)Models, Lower Partial Moment (LPM) Models, Value-at-Risk (VaR) Models and Expected Shortfall (ES) Models, to measure the hedge ratio and hedge performance. Also in this study, the risk indexes, HE1、HE2、HE3 and HE4, were used to evaluate the hedging performance of each portfolios, and the results are shown as follow：</p> <p>1. To compare with different optimal hedging ratios, when the estimation period is fixed, the hedging ratios decreased as the hedging period increased. No matter which future or hedge ratio we employ, the hedging strategies tend to perform better when the estimation period or hedging period increases.</p>

	<p>2. When measuring hedging costs, the TAIEX and TX turns out to be more costly TAIEX and MTX. The TSEC Taiwan50 index and T5F cost more than ETF and T5F. The result implies when the portfolio has a higher volatility, it also has a high hedge cost. Since ETF is the only spot target available in the market, it is easier to form a hedging investment portfolio than the other three indexes in the real world.</p> <p>3. In sum, the performance of Minimum Variance ( MV ) Models provides the optimal hedge ratio in most cases, the results are especially significant towards the end of the term. LPM performance turns out to be second from the best where VaR and ES are third and last. The same performance result shows when all four HE hedge index measurement standards are applied.</p> <p>4. In practical situations, the hedging cost of MV models cost more than ES models and LPM models. Therefore, investors need to consider opportunity cost of reaching the optimal investment efficiency while making the model selection.</p>
<b>Key Words</b>	Hedge Ratio, Minimum Variance, ETFs