

## 與時變動之系統風險探討-以轉換迴歸模型為例

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### 摘要

過去衡量基金績效時,通常是在基金經理人採取固定的系統風險假設下處理,但基金經理人為了提高績效,通常會依市場情況調整投資部位,而隨著經理人持續買入或賣出證券以獲取較高報酬率的交易活動,基金投資組合的系統風險也隨之變動。依此觀點,本文想討論基金經理人執行買入策略和賣出策略兩種情況下,選擇的系統風險是否顯著不同。樣本期間自 2005 年到 2009 年共五年的基金淨值日資料,符合條件的基金共有 146 支,分析時以市場上常用之技術指標值為依據,決定經理人買入和賣出決策的時點,再以最大概似法估計基金在兩種狀態下的貝它值及機率。結果指出基金經理人在買入和賣出兩種狀態下承擔的系統風險值明顯不同,並獲致以下結論。第一,基金的系統風險在多數情況下小於一,表示台灣的基金經理人操作較為保守,不敢承擔高於市場投資組合波動的風險。第二,除了乖離率和心理線兩項指標,多數技術指標呈現基金經理人執行買入策略的貝它值低於賣出策略貝它值。第三,執行買入策略時,基金經理人較易獲得顯著的超額報酬率,例如 12 日 *RSI*、*MTM*、威廉指標和 6 日乖離率,績效顯著的基金數約佔全部基金數的三成到五成比率;執行賣出策略時,績效顯著的基金相當少。第四,當選擇的指標周期愈長,買入狀態和賣出狀態的貝它值差異愈小,可由威廉指標和乖離率驗證。

**關鍵詞**: 與時變動貝它值、轉換迴歸模型

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## The Study of Time-Varying Systematic Risk – By Switching Regression Model

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### Abstract

Many studies always assumed the systematic risks fund managers facing are stationary when measuring the mutual funds' performance. While the fund managers revised their portfolio position according the market circumstances in order to get better performance. Thus, the systematic risks would also change with these trading behaviors. We use daily net worth of 146 mutual funds from 2005 to 2009 to estimate the betas of the long and short strategies using MLE method. Several popular technical indexes are used to judge the transition timing of buying and selling strategies to get different state systematic risk. The results showed that there were significant systematic risks between buying state and selling state. Firstly, the betas of Taiwan mutual funds were smaller than one in most situations. It means that fund managers behaved cautiously and wouldn't bear more volatilities than the market. Secondly, Buying betas were lower than the Selling betas in most technical indexes besides *Bias* and *PSY*. Thirdly, mutual funds showed significant superior performance in buying state such as *12day-RSI*, *MTM*, *William Overbought/Oversold Index* and *6 day-Bias*. There were about 30%-50% funds they have significant superior performance. Fourthly, when the data used to estimate betas are longer, the differences between buying state and selling state got smaller such as *Williams Overbought/Oversold Index and Bias*.

**Keyword:** time-varying beta, switching regression model

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