考慮風險值的投資組合策略之實證分析

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摘要

　　2007 下半年美國次級房貸問題爆發，造成 2008 年的全球金融風暴，使得風險控管備受矚目。本文探討投資組合考慮風險值（Value-at-Risk）相關方法後，可以更有效捕捉下方風險（Downside Risk）及增加報酬。研究方法利用傳統馬可維茲 Mean-Variance 模型、加入三階、四階動差的修正風險值（Modified Value-at-Risk）模型與修正夏普比率（Modified Sharpe ratio）模型，三種不同策略模型之下，進行投資組合的最佳化評估。

　　分析投資組合傳統股債的增加以及加入避險基金（Hedge Fund）與管理期貨（CTA）等另類投資，對於分散風險的程度、績效提升的比較。實證結果顯示，Modified Value-at-Risk 模型與 Modified Sharpe ratio 模型的確可以有效控制投資組合的下方風險，加入避險基金投資組合在多頭市場績效較管理期貨佳，而加入管理期貨投資組合在空頭市場績效較避險基金好。

關鍵詞：修正風險值、修正夏普比率、管理期貨、避險基金、下方風險

The Empirical Analysis of Portfolio Strategy based on Value at Risk

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ABSTRACT

The global financial crisis in 2008, following the breakdown of the U.S. subprime mortgage market in the second half of 2007, light the importance of risk management. This paper argues that related methods of Value-at-Risk (VaR) lead portfolios to capture downside risk effectively and increase return. We measure performance and optimize portfolios by three strategic models, as the traditional Mean-Variance model of Markowitz (1952), the Modified VaR model including the third and fourth moments, and Modified Sharpe ratio model. Subsequently, in addition to stocks and bonds, our study forms alternative investments, as hedge funds and managed futures (CTA), into the traditional portfolio consisting of both stocks and bonds; and then, we analyze investment performance and risk diversification of these portfolios. The empirical evidence exhibits that: first, both Modified Value-at-Risk model and Modified Sharpe ratio model effectually enable portfolios to control downside risk; second, the portfolio with hedge funds outperforms with CTA in a bull market, and the contrary in a bear market.

Keywords：Modified VaR, Modified Sharpe ratio, Managed Futures (CTA),

Hedge Funds, Downside Risk

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