

A study on selection schemes of co-integrated assets for pairs trading

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Abstract

This paper investigates the selection of co-integration assets to achieve more promising profit in pairs trading. A selection scheme combining the co-movement detection technique and the co-integration property is proposed to form the portfolio. A GARCH error correction model is employed to generate co-integrated asset returns. Simulation results indicate that the proposed scheme yields more stable profit than randomly choosing co-integration assets in pairs trading. We further apply the proposed scheme to analyzing 185 exchange rates during the period of March, 2011 to April, 2013 and employed the particle swarm method to estimate the GARCH error correction model.

Keywords: co-integration, co-movement, error correction model, pairs trading, particle swarm optimization