

Arbitragem Estatística, Estratégia Long-Short Pairs Trading, Abordagem com Cointegração Aplicada a Dados do Mercado Brasileiro

João F. Caldeira

Sicredi Asset Management e PPGE-UFRGS

Resumo/Abstract:

The motivation for this paper is to apply Johansen and Engle-Granger cointegration tests to identify pairs of shares to be used in pairs trading strategy. Pairs trading is a statistical arbitrage hedge fund strategy designed to exploit temporary deviations of long-term equilibrium relationships between two stocks. The idea is simple: find two stocks that move together and take long/short positions when they diverge abnormally, hoping that the prices will converge in the future. In addition to estimating a long-term equilibrium to identify the pairs and model the resulting mean-reverting residual series, we used an indicator of profitability in in-sample simulations to select trading pairs to compose a pairs trading portfolio in out-of-sample tests. We assessed the profitability of pairs trading investment strategy with daily data from Brazilian stock market from January 2005 to December 2009. By applying simple rules of trading we obtained an average return of 17.49% per year for a pairs trading portfolio that is self financing. Reaching the Sharpe index of 1.29 and a low correlation with the market, the results reinforce the use of concept of cointegration in the quantitative management funds.