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G7 Stock Markets: Who is The First to Defeat The DCCA Correlation?

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Abstract

The Efficient Market Hypothesis (EMH), one of the most important hypothesis in financial economics, argues that return rates have no memory (correlation) which implies that agents cannot make abnormal profits in financial markets, due to the possibility of arbitrage operations. We analyse G7 stock returns using detrended cross-correlation analysis and its correlation coefficient, a methodology which analyzes long-range behavior between series. Our main results show that the long-range correlation of return rates is significant till (at least) the 140th lag, which corresponds to about seven months. The stock markets that show higher serial dependence, evidence a strong correlation that goes over the 200 consecutive days. Does this result undermine the EMH?

***Keywords*:** Efficient Market Hypothesis, long-range correlation coefficient, lag, detrended cross-correlation analysis.

JEL Codes: G14, G15

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