THE USE OF DETRENDED FLUCTUATION ANALYSIS - DFA TO PORTFOLIOS FORMATION

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ABSTRACT

This research analyzed stocks listed on Ibovespa - SÃ£o Paulo Stock Exchange Index -, in two distinct periods of evaluation and based on 2,003 daily registers for each of the stocks, in order to characterize the historical series as non-correlated or correlated in long range. This paper defined the percentage ratio of portfolio stocks from these series by applying, with contribution from statistic physics, the DFA method. Between stock groups evaluated in annual periods subsequent to the analyses of historical series, the group composed by stocks with correlated in long range series presented superior financial returns than the ones from Ibovespa. Regarding the group composed by stocks with non-correlated historical series, it was not possible to obtain abnormal gains.

Keywords: *detrended fluctuation analysis; long range correlations; portfolios*