

The Days-of-the-Week Effect and LME Metal Market ~Nonlinear and Random Shuffling Approach~

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Abstract

This paper applies nonlinear nonparametric time series analytic tool by Wayland *et al.* (1993) and also proposes a test by random shuffling to detect existence of periodic pattern in a time series data and analyzes the days-of-the-week effect on London Metal Exchange listed non-ferrous metal returns. Although the nonlinear time series techniques are an improved and simpler measure of chaotic complexity, the proposed technique makes it possible to carry out hypotheses testing which has not been executed. The empirical analysis investigated the interpolated daily spot & futures price indexes of LME aluminum and copper since 1989. The results indicate that there is an evidence of the days-of-the-week effect and also that speculative behavior rather than hedging has been eminent since then.

Keywords: anomaly, high frequency data, hypothesis testing, interpolation, rank, random shuffle