Study on the Random Anomalies in the Stock Market ANDREW
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per uses the rescaled range analysis (R/S analysis) method to examine the fractal
characteristics of the Index. Due to the possibility of multiple bubbles in the stock
market, the log-periodic power law (LPPL) model is used to identify the bubbles in
different periods. In order to conduct an investigation of this index, a calculation
and analysis of the fractal dimension of the index was used along with LPPL model-
ing. The fractal dimension can be related to the nature of changes in the price of a
stock, which allows for the detection of market bubbles. The LPPL modeling allows
for the classification of bubbles as positive, negative, reverse, and reverse negative.
Financial bubbles generated by market jumps can result in tremendous economic
damage. Given their catastrophic impacts, it is important to accurately detect and
identify market jump anomalies and their underlying financial bubbles. Existing re-
search on financial market bubbles can be broadly divided into four categories: herd
behavior, bubble theory, LPPL analysis, and the market jump anomaly. Most of
these studies analyzed the formation, development, and bursting of financial market
bubbles retrospectively.

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