HUKUM BENFORD DAN PENYIMPANGAN PASARAN SAHAM SEMASA PANDEMIK COVID-19
(*Benford's Law and Stock Market Deviation during COVID-19 Pandemic*)

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ABSTRAK

Taburan umum digit pelopor signifikan Hukum Benford secara amnya adalah sangat pencong ke arah digit yang lebih kecil dan mengikuti taburan logaritma khusus. Digit pelopor signifikan Hukum Benford telah digunakan secara meluas sebagai alat analisis forensik untuk mengesan penyelewengan data, penipuan dan manipulasi berdasarkan kepada sesuatu ujian keakuran. Kajian ini memanfaatkan ujian keakuran Hukum Benford sebagai kaedah statistik yang digunakan untuk menilai sama ada set data mengikut atau menyimpang daripada corak teori taburan Hukum Benford. Objektif kajian adalah untuk menyiasat keakuran taburan digit pelopor signifikan pertama dan kedua indeks FBMKLCI dan SSEC sama ada mengikut taburan jangkaan Hukum Benford atau tidak semasa berlakunya pandemik COVID-19 berdasarkan ujian keakuran min sisihan mutlak. Hipotesis nol taburan kedua-dua indeks akur kepada Hukum Benford ditolak jika nilai kiraan adalah lebih besar daripada nilai kritikal. Keputusan kajian mendapati nilai ujian keakuran min sisihan mutlak bagi taburan pasaran saham menyimpang daripada corak taburan logaritma Hukum Benford. Kajian menyimpulkan kedua-dua indeks pasaran FBMKLCI dan SSEC taburan digit pelopor signifikan pertama dan kedua bagi kedua-dua pasaran FBMKLCI dan SSEC tidak akur kepada Hukum Benford semasa berlakunya wabak pandemik COVID-19 di Malaysia dan China. Ketidakakuran kepada Hukum Benford memberi implikasi mengenai integriti dan keblehpercayaan data pasaran saham selain menekankan anomali pasaran dan kelakuan pelabur.

Kata kunci: Hukum Benford; ujian keakuran; digit pelopor pertama; digit pelopor kedua; min sisihan mutlak

ABSTRACT

The general distribution of Benford's Law significant leading digits is commonly skewed towards the smaller digits and follows a specific logarithmic distribution. A General Significant Leading Digit of Benford's Law has been widely applied as a forensic analytical tool to detect data deviation, fraud, and manipulation based on a certain conformity test. This study utilizes Benford's Law conformity testing as a statistical method to assess whether a data set follows or deviates from Benford's Law theoretical distribution pattern. The objective of this study is to investigate the conformity of the first and second significant leading digits of FBMKLCI and SSEC indices whether they follow the expected distribution of Benford's Law or not during the occurrence of the COVID-19 pandemic based on the mean absolute deviation conformity test. The null hypothesis of both stock market indices conforming to Benford Law distribution will be rejected if the calculated value is greater than the critical value. Results of the study for both the FBMKLCI and SSEC market indices showed that the distribution of the first and second leading digits of both markets did not conform to Benford's Law distribution during the outbreak of the COVID-19 pandemic in Malaysia and China. In addition to highlighting market anomalies and investor behaviour, noncompliance with Benford's Law has repercussions for the integrity and reliability of stock market data.

Keywords: Benford's Law; conformity test; first leading digit; second leading digit; mean absolute deviation

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