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Testing The Weak-Form of The Efficient Market Hypothesis on The Johannesburg Stock Exchange After the Global Financial Crisis

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Abstract

The Efficient Market Hypothesis (EMH) remains a central yet contested concept in financial economics. While it provides a useful framework for analysing market behaviour, critics argue that its assumptions do not fully capture real world dynamics. Research on EMH is extensive in developed and emerging markets, but African markets—particularly the Johannesburg Stock Exchange (JSE)—have received comparatively limited attention. This study contributes to that gap by examining the weak form efficiency of the JSE following the 2008 global financial crisis.

Using weekly and monthly returns from three major JSE indices (RESI 10, FINI 15, and INDI 25) and their constituent firms from January 2009 to January 2019, the analysis applies unit root tests (ADF and PP), the runs test, and the variance ratio test. Unit root results generally support weak form efficiency across both indices and individual stocks. The runs test findings are consistent with weak form efficiency, except for weekly data within the RESI 10 index. Variance ratio results indicate inefficiency in weekly returns but efficiency in monthly returns, suggesting alternating periods of predictability and randomness. Overall, the evidence points to mixed efficiency across indices, implying cyclical patterns in market behaviour and supporting the relevance of active portfolio management.

Keywords: Efficient Market Hypothesis, Global Financial Crisis, Johannesburg Stock Exchange, Random Walk, Market Efficiency