DATA REPORT

**Executive Summary**

This report presents a detailed analysis of East African Breweries Limited (EABL) stock, focusing on volatility, trading volumes, dividends, trends, seasonality, and the impact of market indicators over an 18-year period. Through meticulous examination of 4,955 data entries across 18 columns, the report aims to offer investors a robust understanding of EABL's investment potential, risks, and market dynamics.

**Data Cleaning and Preparation**

Initial steps involved standardizing the dataset for analysis, including the exclusion of redundant columns, date parsing for time series analysis, and imputation of missing values in critical columns like Earnings Per Share and Dividends Per Share. This preprocessing ensures the accuracy and reliability of our subsequent analyses.

**Volatility Analysis**

The analysis indicates an average volatility rate of 32.65% for EABL stocks, suggesting moderate to high price fluctuations. This finding is pivotal for investors in assessing the risk associated with EABL stocks, recommending cautious approaches for risk-averse investors and strategic risk management for those willing to tolerate higher volatility.

**Analysis of Abnormal Trade Volume**

Identifying abnormal trading volumes highlighted days with significant deviations, pointing towards potential market-moving events or changes in investor sentiment. This aspect of the analysis is crucial for understanding market dynamics and strategizing around volume-based indicators.

**Dividends Analysis**

The fluctuating dividend payout trends observed in EABL's history indicate variations in company profitability and financial strategies. Notably, a discrepancy in 2024's data suggests a potential suspension or special case affecting dividends, warranting further investigation by investors.

**Trend and Seasonality Analysis**

Through trend detection, seasonality examination, and autocorrelation analysis, it is clear that while EABL's stock has experienced an overall upward trend until 2013, followed by a decline, seasonality does not significantly influence stock movements. This insight is valuable for long-term investment decisions and short-term trading strategies.

**Lag Analysis with Market Indicators**

The correlation and lag analysis concerning market indicators like inflation rates, unemployment, and interest rates reveal varying degrees of impact on EABL's stock performance. Notably, unemployment and mean economic indicators exhibit a stronger negative correlation with stock prices, offering strategic insights for investors focusing on macroeconomic factors.

**Conclusions and Strategic Recommendations**

* **For Risk Management:** Investors should incorporate volatility and abnormal volume insights into their risk assessment and management strategies, considering the potential for significant price movements.
* **Dividend Considerations:** The fluctuating nature of dividends suggests a need for investors to stay informed on EABL's financial health and strategic decisions impacting payouts.
* **Market Indicator Sensitivity:** The stronger negative correlations with unemployment and economic means suggest that these factors should be closely monitored, as they significantly influence stock performance.
* **Investment Strategy:** Based on the identified trends, investors might benefit from a long-term perspective, especially considering the predictive value of past stock prices indicated by autocorrelation analysis.