

Macroeconomic Variables and Stock Market Performance in the Nairobi Securities Exchange, Kenya

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Abstract:- The NSE20 Share Index, reliably used as the benchmark index during the period 2013–2021, appeared to have an unswerving decay, demonstrating a falling-apart market performance within the Kenyan securities exchange. This decline raised concerns among various stakeholders. As a result, the study investigated how macroeconomic factors influence stock market performance at the Nairobi Securities Exchange in Kenya. The research was conducted from January 2013 to December 2021 using an exploratory research design and employed the cointegration analysis method to analyze the data. The target population was 27 annual average macroeconomic variable performances for selected variables. Secondary data information was collected from the Central Bank of Kenya, the Kenya National Bureau of Statistics and the Nairobi Securities Exchange. The findings uncovered a measurably critical affiliation between the exchange rate and stock market performance, where an increment within the exchange rate drives a diminish in stock market performance by -0.11 units. Consequently, an increment in the Treasury bill rate would lead to an increment in stock market performance of 0.139 units, and Treasury bills have shown a factually critical affiliation with the stock market performance. The study prescribed that the government reinforce surveillance on the regulatory framework to strengthen its monetary and fiscal policies and screen macroeconomic variables. Furthermore, it suggested further research on the topic, exploring the use of macroeconomic variables to mitigate the adverse effects they have on stock market performance.

Keywords: *stock market performance, market index, macroeconomic variables,*

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I. INTRODUCTION

Stock exchange markets are fundamental to contemporary liberal economies for several reasons. Firstly, they serve as a vital source of capital for businesses, facilitating access to funds needed for growth and expansion. Secondly, they provide a means for investors to easily buy and sell securities, allowing them to quickly convert their investments into cash when desired. Lastly, stock exchanges play a crucial role in connecting various markets worldwide, fostering interconnectivity, and enabling international trading activities. Consequently, comprehending the functioning and

dynamics of stock exchange markets is essential for gaining insights into the overall state of a country's economy. Various stock indexes maintained by the stock exchanges serve as indicators for describing the general trend in the economy. According to Naik (2013), macroeconomic factors are believed to have a negative impact on the Indian stock market index. According to a study by Ochieng and Oriwa (2017), fluctuations in macroeconomic variables such as lending rates, the 91-day Treasury bill rate, and inflation can have a detrimental impact on the NASI Index. Similarly, Menike (2020) conducted research on the Sri Lankan stock market using monthly data and found that the inflation rate, exchange rate, and Treasury bill rates exhibit a negative reaction towards security prices. Bilaile (2018) posits that exchange rate volatility impacts the behavior of securities performance, investment decisions, regulation formulation, and overall economic response.

Levine (2016) observed that a well-functioning stock exchange promotes economic growth. The previous related studies have presented a mixture of results, thus making it an exciting area to explore its effect on the Kenyan stock exchange. Studies by Abraham (2010), Naik (2013), Adarmola (2015) and Olweny & Omondi (2014) are among the studies conducted in developing countries that show how macroeconomic conditions affect stock market performance.

A positive macroeconomic environment enables the stock market to perform well. In earlier studies, vital macroeconomic factors were demonstrated to predict stock market performance over roughly 30 years. The relationship between macroeconomic conditions and stock market performance has been explored by Nelson (1977) and Fama & Schwert (1977), who both suggest a positive influence. This study aims to study the connection between stock market performance and the effects of Treasury bill rates and exchange rates. While dependent on whether the macroeconomic factors have been unstable, the county's economy has been impacted favorably or unfavorably. Mumcu (2005) stated that the profitability of exchanged commodities and services, resource allocation, investment choices, and domestic prices are just a few of the many variables significantly impacted by an economy's exchange rate. The Treasury bill rate is an interest-independent rate. A higher Treasury bill rate encourages investors to buy more government securities and thus increases the competition with bonds. The competition leads to lower demand for stock market instruments, which has adverse effects. Maghyereh (2002) urged the expected effects of stock prices and

Treasury bill rates on stock market performance to be negative. Throughout history, several variables, each with a unique impact, have affected how well stock markets have performed, including Treasury bill interest rates and foreign exchange rates.

A group of securities dealers established the Nairobi Securities Exchange (NSE) on their own initiative in 1964 to raise funds for long-term capital investments. In Ngugi (2005), the NSE lobbied the government and developed six supportive policy frameworks that have aided in expanding the economy and the security market. The regulatory framework must monitor and maintain the NSE market. The efficiency of a nation's security market is used to monitor and evaluate the performance of its economy. The stock market index is the gauge used to determine the stock market's performance. Yardi and Adjasi (2007) posit that the World Bank, IMF, and ADB use stock market performances to evaluate countries' economic growth and undertake development programs in emerging markets. The research assessed how well the Nairobi stock exchange operates using the NSE20 share index. Agrawal (2010) posits that the NSE20 share index has been used to predict market performance with stability and sustainability for over forty-two years before introducing the other market indices. Prior researchers have proven the NSE20 share index to be very reliable in predicting the future performance of the stock markets. To evaluate the account of the Nairobi Securities Exchange, the research endeavored to use the NSE20 share index. Throughout the reviewed timeframe, NSE20 Share Index performance posted an annual average point of 4,788.8 in 2014, while it gained 229.2 points to record the highest point of 5018 in 2015. In the year 2016, it dropped 400 points, further dropping an annual average of 1062.3 points, while in the year 2017, it further lost an annual average of 61.6 points; moreover, in the following year, it lost an annual average of 202 points in the year 2018. In the years 2019, 2020, and 2021, the NSE20 Share Index further lost 604.6, 719, and 45.9 points, respectively. In 2021, they recorded their lowest performance under the study period record of 1922.60 points. To address the research gap, this study focused on determining the effects of macroeconomic variables on the performance of the NSE20 Share Index in Nairobi, Kenya.

II. PROBLEM STATEMENT

As observed by Feily and Khalid (2020), the fluctuation of a nation's stock market performance serves as an indicator of its economic well-being. By closely monitoring the direction in which the stock market's performance moves, one can obtain valuable information about the overall path taken by the country's economy. As a measure of a country's economic well-being, the stock market's performance becomes critical because it gives the individual stock valuations and performances that attract individual and corporate investments from local and foreign investors. It also aids in determining various policy implementations and strategy formulations by the government by setting the necessary adjustments as directed by the economic imbalances. Moreover, it establishes a yardstick for evaluation and sets up guidelines for the fiscal policy to be

adopted, as well as aiding in pursuing future academic work and research.

The Kenyan stock market has been experiencing declining performance, as observed by the Kenyan Economic Survey (GoK,2013), signaling that macroeconomic variables are to be kept under closer monitoring. Waithaka (2014) and Nyanaro (2017), while using the NSE20 Share index, observed that the NSE depicted declining economic performance using different macroeconomic variables in the past decade. Analysts such as Ouma and Muriu (2014), Ochieng and Adhiambo (2012), Esin (2013), Ballieh and Ham (2015), Yusuf (2015), and Elly (2021) all utilized NASI. They famously said that macroeconomic factors did not have an essential impact on the execution of the stock market. Then again, Ozcan (2021), Qwader (2017), and Makhoha (2020), utilizing the NSE25 Share Index, found a positive relationship between stock market execution and the NSE25 Share Index. In addition, Jagongo and Wamugo (2016) observed that macroeconomic factors play a vital role in evaluating the execution of the stock market. All researchers used different macroeconomic variables than the one this project used, as well as mixed indices rather than the single index the study employed, and the time frames were too different from the ones used in this research.

Market indexes are valuable tools used to measure stock market performance. The three indexes used in Kenya are the NSE 20 Share Index, the NSE All Share Index (NASI), and the NSE 25 Share. Oliver and Odhiambo (2013), Waithaka (2014), and Gatuhi (2018) postulate that the NSE20 Share Index has consistently and with stability measured the stock market's performance accurately. Due to its consistency and dependability, the NSE20 Share Index was used to gauge the Nairobi Securities Exchange's performance. The NSE20 Share Index from 2013 to 2021 demonstrated a constant decline in points from an annual average of 4,788.8 in 2013 to 1922.60 as of 2021, according to the NSE Annual Report (2023). From the review, the NSE20 Share Index constantly declined from January 2013 to December 2023. As observed by Waithaka (2014) while reviewing the performance of the NSE20 Share Index, he concludes the index has been experiencing acute ragged patterns. The objective of this study is to examine how macroeconomic variables impact the performance of the Nairobi Securities Exchange. This investigation aligns with the findings of the Kenya Economic Survey report (2013), Ochieng and Adhiambo (2012), and Ouma and Muriu (2014), which all indicate that macroeconomic variables have a substantial influence on the stock market's performance.

Contrary to the discoveries of Esin (2013), Ballieh and Ham (2015), and Yusuf (2015), who concluded that macroeconomic factors had a generally restricted effect on the execution of the stock market, this research pointed to analyzing the impacts of microeconomic factors on stock market execution. The analyst inspected the changes within the study factors over the required period. Altogether, during the period, a large vacillation within the exchange rate was observed, from a yearly average rate of 86.12 in 2013 to a tall of 109.64 in 2021. Based on the studies conducted by Ouma and Muriu (2014), Ochieng and Adhiambo (2012), Esin

(2013), and Ballie and Ham (2015), it has been established that macroeconomic factors do have an effect on stock market performance. In any case, studies by Li and Xu (2015) and Reham and Iffat (2015) in emerging nations have found an immaterial relationship between macroeconomic factors and stock market performance.

The unique discoveries from distinctive analysts and the distinctive viewpoints emerging from the utilization of diverse records have increased the researchers' interest in investigating the effects of macroeconomic variables on the performance of the Nairobi Securities Exchange. Li and Xu (2015) and Rehan and Iffat (2015) contend that there is a constrained relationship between macroeconomic variables and stock market performance in developing countries. The examination of the effects of macroeconomic variables on stock market performance therefore becomes a subject of investigation due to the clashing results observed by prior research.

A. *Specific Objectives*

The specific objectives were;

- To establish the effects of changes in exchange rates on the NSE20 Share Index.
- To find out the effects of changes in ninety-one-day Treasury bill rate on the NSE20 Share Index.

III. LITERATURE REVIEW

This section represents a theoretical and empirical review of the effects of macroeconomic variable on the stock market performance.

A. *Theoretical Review*

➤ *Prospect Theory*

According to Tversky and Kahneman's 1979 approach, the Prospect Theory suggests that when faced with uncertain situations, investors typically make choices that may not be consistent with conventional ideas like the efficient market hypothesis. The conjecture is grounded on behavioral elements rather than normative frameworks when making decisions. Lowies (2012) concluded that the exchange rate was vital in helping, particularly in examining the decisions made by investors under various circumstances. As opposed to the economic foundations outlined by normative theories, the theory's proponents believe that irrational considerations drive the process of making investment decisions.

Kahneman & Tversky (1979) posit that the reality of day-to-day decision-making by investors varies from the assumptions that economists hold. According to Babaries' (2021) research, it may be understood how exchange rate variations affect stock market performance at the Rwandan stock exchange using the prospective theory. Prospect theory research in the past has shown that investment decisions involving exchange rates are significantly influenced by behavioral variables rather than economic facts. Using time series data to measure the effects of exchange rates on the NSE20 Share Index, the study is hence set to shape the anticipated association between the exchange rates and the NSE20 Share Index's performance.

➤ *Efficient Markets Hypothesis Theory (EMH)*

Market efficiency, as described by Fama (1970), means that all accessible information is accurately reflected in stock pricing. The Efficient Market Hypothesis (EMH) supporters have made the following recommendations: the semi-strong variety contends that current prices already account for everything that is publicly accessible, in contrast to the weak form, which claims that current asset values only reflect historical data. According to the strong form, even insider information is swiftly absorbed into market values, making anomalous profits unlikely.

Previous scholars Fama (1981), Oriwa (2010), Macharia (2015), and Mayasami & Sims showed that by checking the implications of macroeconomic variables on the performance of stocks using time series data, it is possible to prove that information influences stock price swings (2020).

The EMH hypothesis is pertinent to this study, since it has been shown in prior research that it enables a researcher to conclude how the Treasury bill rate affects stock market performance. The study is hence set in the direction of shaping the anticipated association between the 91-day Treasury bill rate and the NSE20 Share Index performance.

➤ *Arbitrage Pricing Theory*

Ross (1976) asserts that the relationship between assets and independent macroeconomic variables is defined by the Arbitrage Pricing Theory, and that a risk-free element also contributes to the firm's overall worth.

The theory is pertinent to this research since it has been shown in earlier studies that stock market performance can be predicted using a time series of predictor factors, with economic variables being one of such variables. It will be possible to ascertain the magnitude, nature, or even extent of a link between macroeconomic factors and stock market performance by looking at the effects of macroeconomic variables. The arbitrage pricing theory will be useful to the researcher who investigates how macroeconomic variables affect the performance of the NSE20 share index.

$$E(R)_i = E(R)_z + (E(I) - E(R)_z) \times \beta_n \dots\dots$$

Where $E(R)$

i = Expected return on the asset

R_z = Risk-Free rate of return

β_n = Sensitivity of the asset price to macroeconomic variables(n)

E_i = Risk Premium associated with factor i

The study is hence set to in the direction of shaping the anticipated association between the macroeconomic variables and the NSE20 Share Index performance.

➤ *Empirical review*

➤ *Exchange Rate and Stock Market Performance*

There's a growing discrepancy in prior research on the relationship between exchange rates and the stock market performance. The Kenyan shilling to the US dollar was the reference currency used to carry out the research activity. When exchange rates fall, it further devalues an already

undervalued currency, which negatively impacts the securities exchange. Soenen & Hannigar (1988), Phylaktis & Ravazzolo (2005), and Hosting (2011) have alleged a strong link between the Johannesburg Stock Exchange's exchange rate and stock market performance. Several studies examining the link between exchange rates in rich and developing nations have produced varying results.

Due to the depreciation of their home currencies, exchange rate fluctuations typically hurt the stock prices of the countries' companies. Using Johansen's cointegration test, Ozcan (2010) discovered that macroeconomic variables, including the exchange rate, Treasury bill rate, money supply, and current deficit, displayed a long-run equilibrium in the ISE index.

The initial goal of the study was to evaluate how changes in the exchange rate affected the NSE20 Share Index. Given that the P-value was 0.002, it was assumed that the change in exchange rate had an analyzable impact on the performance of the stock market. According to the descriptive results, the average exchange rate was 99.67, with a standard deviation of 7.81. The research's conclusions on exchange rate trends from 2013 to 2021 varied between 86.11 and 109.8, rising gradually throughout the course of the study.

The significance of exchange rate volatility impacts the stability and expansion of a nation's stock market. According to Baillie & Han (2018), exchange rate volatility impacts company profitability, price stability, and a nation's economic stability. According to Yusuf (2015) and Osamuonyi et al. (2012), there exists a favorable tie-up link between the exchange rate and stock market performance. Researchers have yet to reach a consensus regarding the effects of exchange rates on the NSE20 share index's performance.

➤ *Ninety-one-day Treasury bill rate and Performance of the Stock Market.*

Treasury bills have been termed dangerous free interest rate since they are government-issued securities. The Treasury bill comes in different forms depending on the terms on which it is floated. The Treasury bills also form the benchmark for analyzing returns from investments in financial assets in most modern economies worldwide. The Treasury bill rate is a necessary monetary instrument used by federal banks of various countries in the global markets to influence the securities exchange markets. In their respective studies, Augustine (2012), Nantwi (2011), Hislamn (2010), Maharib (2012), and Tursoy (2018) hypothesized a negative correlation between stock market performance and Treasury bill rates.

It was hypothesized that the change in exchange rate had a significant relationship with the stock market's performance, as the P-Value was 0.007. The descriptive findings reveal that the Treasury bill rate mean was 8.105 with a standard deviation of .9459. Ninety-one-day Treasury bill rate trend findings from 2013 to 2021 ranged between 6.86 and 10.9, with a ragged, inconsistent occurrence pattern during the study.

Several researchers, including Roll (2020), Sargent (2017), Hamburger and Platt (2015), and Fama (1975, 1976), contend that there exists a connection between stock market accounts and the Treasury bill rate, supported by various perspectives. Given the contrasting opinions among scholars on this topic, it is crucial to consider the impact of the 91-day Treasury bill rate on the NSE20 share index.

IV. RESEARCH METHODOLOGY

This section defines the research design employed, the data collected and the model employed to explain the exchange rate and Treasury bill rates relationship with stock market performance in the Nairobi Securities Exchange Kenya.

A. *Research Design*

The study employed an exploratory research design. Brown (2016) posits that the theme of the design is to tackle new problems. The research design is anchored on assessing how variables relate among themselves and their relationship with the dependent variable. The study sought to establish the effects of macroeconomic variables on the stock market performance at the Nairobi Securities Exchange in Kenya. The target population consisted of 27 annual averages of the selected macroeconomic variables for the study. Since this was a census study, information was obtained from every qualified variable in the specific groups. The study deployed a census, since the target population was small. The secondary data for all observations was obtained from the various government websites. Data analysis was carried out using descriptive statistics and inferential analysis.

B. *Empirical model*

In order to explain the linkage between the macroeconomic variables and the NSE20 Share Index performance the study employed correlation and regression analysis. Regression model of the form outlined below was applied, consistent with (Ndede, Jagongo and kosgei, 2019; Washington, 2014; Gezu, 2014)

$$Y_t = \beta_0 + \beta X_t + \epsilon_t$$

Where: - Y_t is the dependent variable in quarter 't', β_0 is the constant term, β is the coefficient of the independent variables of the study, X is the independent in quarter 't' and ϵ_t the error term. The coefficients of the explanatory variable were estimated by the use of an Error Correction Model (ECM) to analyze the dynamic short term relationships. Based on the conceptual framework used the estimated model was;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e$$

Where;

Y =NSE20 Share index performance; β_0 = Intercept; X_1 =Exchange rate; and X_2 =Treasury bills and $\beta_1, \beta_2, \beta_3$ = Coefficients while e = Error variable

C. Target population and Data Collection

The population for the study was all 27 annual averages of macroeconomic variables chosen for the research over the nine-year period. This formed the sampling frame for the study. These include the average annual exchange rates and annual 91-day Treasury bill rates. The study employed a census survey by studying the two macroeconomic variables during the study period. The study used annual averaged time series secondary data for the period 2013–2021 from the two macroeconomic variables. Secondary data on NSE20 Share Index performance was collected using a data collection tool from the government agencies: the Central Bank of Kenya, the Nairobi Securities Exchange, and the Kenya National Bureau of Statistics, and fed into data schedules for analysis.

V. RESULTS AND DISCUSSIONS

This section presents the study findings and discussion.

A. Empirical Results

Two independent variables (Foreign exchange rate & Treasury bill rate) were regressed against stock market performance which is the dependent variable. Long run relationship was determined using the general regression model. Secondly, both short run and long run effects were conducted using ECM mechanism which is considered to be the best fit model to obtain both short and long term relationships in one equation. The regression model long run model was in the form of the following equation; $Y_t = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + e_t$

The relationship between the NSE20 Share Index performance and the two independent variables were as follows;

$$\text{NSE20 Share Index} = 16.149 - 0.11X_1 + 0.139X_2$$

The model summary indicated that only 87.3% of the total variations in the dependent variable could be explained by the study's independent variables, namely, the exchange rate and treasury bills. While 12.7% of the total variations could be attributed to other factors that were not part of the study model, the model was found to be significant at the 5% significance level, as shown above, with a p-value of about 0.00.

Ceteris paribus, a unit increase in exchange rates will decrease stock market performance by -0.11. Exchange rates, however, had a statistically significant negative and positive association with stock market performance, implying that a unit increase in exchange rates would be accompanied by a corresponding increase in stock market performance. While Treasury bills were found to have a positive and significant relationship with stock market performance, holding other factors constant, a unit increase in Treasury bills will increase stock market performance by 0.139. Even in the absence of all those factors, the NSE20 Share Index will have an average of 16.149, as shown by the intercept value. The findings of this particular research are supported by the findings of Kuwornu (2016) and Sandra and Sebastian (2019), who asserted that macroeconomic variables have an influence on stock market performance.

With a P value of 0.002, which is less than the critical significance level of 5%, the study's results show that exchange rates and stock market performance are statistically related. Accordingly, an increase in exchange rates is associated with a 0.11 percent decline in stock market performance. These findings support earlier studies by Ngabirano (2020), Oriwa (2012), and Maina (2019) that found the exchange rate had a detrimental effect on the performance of the NSE20 Share Index while a unit rise in the rate on 91-day Treasury notes boosts stock market performance by 0.139, holding all other variables equal. With a p-value of 0.007, which is lower than the essential significance criterion of 5%, the rate of ninety-one-day Treasury bills exhibited a statistically meaningful relationship with stock market performance.

B. Diagnostic Tests

➤ Multicollinearity

Multicollinearity indicates the presence of high correlations between predictor variables in a regression analysis. It can cause instability in the estimated regression coefficients, making it difficult to interpret the individual effects of predictors accurately. It reduces the individual explanatory variables' predictive power because they share almost the same information and are therefore highly correlated. (Theodros, 2011). Here are some commonly used ones: VIF was employed in the study to measure the extent to which the variance of the estimated regression coefficient is inflated due to multicollinearity. For each predictor variable, the VIF is calculated as the ratio of the variance of the estimated coefficient to the variance of that coefficient if that variable was not correlated with the other predictors. VIF values greater than 10 indicate the presence of multicollinearity, with higher values indicating stronger collinearity. VIF values showed no multicollinearity between the explanatory or independent variables since all the VIF values for all the variables were found to be below 10, indicating the absence of multicollinearity.

➤ Autocorrelation Test

Autocorrelation indicates a correlation between observations of a time series and their lagged values. In statistical analysis, it is important to check for autocorrelation to ensure the validity of the assumptions and the reliability of the results. The Durbin-Watson test is a commonly used test to detect autocorrelation in regression models. The Durbin-Watson Test: The Durbin-Watson test is a statistical test that examines whether there is first-order autocorrelation (correlation between adjacent observations) in the residuals of a regression model. The test statistic, denoted as DW, ranges between 0 and 4. The critical values of the test statistic depend on the sample size and the number of predictors in the model. Lower values of DW indicate the absence of autocorrelation. From the findings, the DW statistic was found to be 0.608, indicating the absence of autocorrelation in the dataset that was considered for multiple regression analysis. The dataset could then be subjected to further statistical analysis. Similar findings were concluded by a number of studies (Ahmad & Bashir, 2013; Chebiwott, 2010; Ting et al., 2015; Washington, 2014). This therefore implies that the significance of the parameters in the model will be

accurate and not misguided, since an independently distributed error term for a particular observation is not associated with the error term of another reflection.

➤ *Test for Normality*

Normality tests assess whether a dataset follows a normal distribution. Departures from normality can affect the validity of some statistical procedures, such as hypothesis tests or confidence intervals. The data were subjected to a normality test using Kolmogorov-Smirnov at a 5% significance level. From the findings, the Kolmogorov-Smirnov was found to be greater than 0.05 thresholds, and hence it was ascertained that the dataset is normally distributed. Similar findings were concluded by a number of studies (Ahmad & Bashir, 2013; Chebiwott, 2010 ($p = 0.7889$); Washington, 2014). The errors were independently and identically distributed with zero mean and constant variance, and thus the coefficient estimations were of normal distribution with means similar to the corresponding coefficients, and therefore regression analysis fits for analysis.

• **Heteroscedasticity test**

Information sets were also tested for heteroscedasticity. It was conducted by utilizing the Glejser test measurement. Heteroscedasticity delineates the probability of remaining fluctuations having contrasts from one period to the next, from one level of autonomous variable to the next (Long and Ervin, (2010). The p-value of the test statistic ($p = 0.98$), was greater than the significance level of 0.05 (5%); therefore, there was no heteroscedasticity. Similar findings were concluded by a number of studies (Ahmad & Bashir, 2013; Chebiwott, 2010; Ting et al., 2015). According to the discoveries that appeared to be observed, none of the factors had heteroscedasticity since they all had noteworthy values less than 0.005 (Glejser, 1969).

VI. CONCLUSION

Stock market performance is not only important for the economy of one country but also for the whole economic world, as the deterioration in stock market performance in Kenya, East Africa, Sub-Saharan Africa, Asian countries, and America has led to the devastating collapsing of the once dominant stock market for reasons and factors that need to be identified. It is believed that once we identify the factors that lead to the deterioration of stock market performance, policies to prevent any future deterioration in stock market performance can be addressed. The deteriorating performance of the NSE20 Share Index serves as a prelude to economic disability. The purpose of this study was to establish the effects of exchange rates, Treasury bill rates, and the NSE20 Share Index on the Nairobi Securities Exchange in Kenya.

Regression analyses show an adverse relationship between the exchange rates and the NSE20 Share Index. The Treasury bill rate has a positive relationship with the NSE20 Share Index. The P values (0.002 and 0.007 for exchange rate and treasury bill rate, respectively) indicate statistically significant relationships between the two independent variables and the NSE20 Share Index as the dependent variable. From the observation here above, macroeconomic

setting is very important for the stock market performance in the country. The findings are a pointer to the regulators to ensure economic stability and growth of the economy and to ensure the macroeconomic variables mentioned in the study are regulated to limit the deterioration of the NSE20 Share Index's performance. For instance, the treasury bill rate should be increased conventionally to spur investment in the economy. The regulators should monitor both monetary and fiscal policies to ensure the macroeconomic variables are kept within manageable limits.

From the analyses, all the two explanatory variables are significant in affecting NSE20 share index performance in Kenya. However, the treasury bill rate has a greater impact on stock market performance. A unit increase in the Treasury Bill Rate would increase the NSE20 Share Index by 0.139 units, as per study findings. Policymakers can therefore use the results of these findings to adjust treasury bill rates appropriately. A unit change in exchange rates, however, reduces the NSE20 Share Index's performance by 0.011 units. The government should regulate the macroeconomic variables in order of their coefficients, given that both depict a significant relationship with the dependent variable. The central bank of Kenya, through its monetary policy and fiscal policy guidelines, should set policies that regulate the macroeconomic environment for better management of the stock market's performance in the country. The above study was carried out over nine years on an annual time series. Other studies can consider a longer period and employ different macroeconomic variables. Other than macroeconomic variables, there are other factors that contribute to the stock market's performance in Kenya that can be examined in the future research.

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