EFFECT OF CURRENCY DEPRECIATION ON SHARE PRICES OF LISTED AGRICULTURAL FIRMS IN KENYA.

Abstract

This study sought to evaluate the effect of currency depreciation on the share prices of Kenyan agricultural companies that were listed between 2020 and 2023.The methodology adopter was descriptive correlational. As of December 2023, the six agriculture firms listed on the NSE were the target demographic. A basic regression analysis was conducted to determine the degree of correlation between exchange rate depreciation and stock market performance, secondary data was collected from the Central Bank and Nairobi Securities Exchange between January 2020 and December 2023. It is evident that the Kenyan shilling has drastically depreciated against the dollar while stock prices of agriculture firms exhibited a price increase, additionally the study found out that a unit change in in exchange rates leads to a change in stock price by 0.094. This implies a 9.49%. change stock prices of agriculture firms .This implies that exchange rates and stock prices have a weak positive relationship, hence exchange rates cannot fully account for the stock's volatility.

Keywords:*Exchange Rate Depreciation, Stock Prices, Listed Agricultural Firms, KES /USD*

INTRODUCTION

A key component of the economic growth of a country is the exchange rate and stock prices. Economists are growing more worried about these two issues due to the relationship between stock returns and exchange rates, as well as the extent of their mutual impact. (Mwangi 2017). Currency depreciation is the fall in value of one currency against the other currencies leading to the rise of desired and undesired effects in an economy. The depreciation of a currency affects the performance of firms in various ways.For example, businesses that export to international markets profit from the nation's currency devaluation while firms that import and who do not engage in international business are negatively impacted. Because the firm's future cash flows are dependent on changes in exchange rates, the volatility of foreign exchange rates has an effect on the firm's value. Given that stock market performance is typically regarded as a measure of a nation's financial and economic states, volatility is inevitable—in fact, preferred—since it signals a shift in values across various economic activities and could lead to more effective resource allocation. (Mwangi 2017).

According to the World Bank economic prospectus (2023), financial market turbulence from 2018 to 2022 illustrated clearly that developed, emerging markets, and developing economies faced the danger of unstable exchange rate shifts. This indicated that despite the face of slowing growth, central banks had to tighten policies, ease currency pressures, and protect against inflationary pressures. Furthermore, a lot of developing nations and emerging markets had to tighten monetary policy in order to boost market confidence in the face of large currency

depreciations. Turkey and Argentina have seen the strongest currency pressures as a result of increasing concerns about their monetary policy frameworks and capacity to service their debt. Even so, several African nations saw major depreciations in their exchange rates, especially those with significant external finance requirements and those that were unable to sustain overlapping currency pegs or other currency arrangements. The necessity for stricter monetary policies has forced central banks to restore market confidence. For example, in the last quarter of 2022, the number of countries raising policy interest rates was four times more than those that cut theirs(World Bank 2023).

In Kenya today, there has been increasing variability in the exchange rates as the shilling drastically depreciated against all major global currencies in the last decade posing adverse effects on the domestic economy. Adler and Dumas (2015) posit Kenya has always been affected by widespread economic implications on the economy as a result of the local currency depreciation that has happened over the last many years. The country has experienced different exchange rate regimes such as the fixed exchange rate regime from 1966 to 1992 and thereafter in 1993 the exchange rate system was matched to the official interbank rate and the shilling was allowed to float, this system allowed the prices of currencies to be determined by the demand and supply of money leaving companies exposed to the exchange rate risk (Adler and Dumas 2015).

A decline in the value of the Kenyan Shilling has a negative effect since it means paying more in Shillings to finance imports. A weak shilling does, however, have a benefit in that it lowers export prices abroad, making the nation more competitive on the global stage and strengthening our position in the trade balance. Additionally, a weak shilling inhibits the ultimate consumption of luxury goods and encourages domestic investments that generate jobs. To boost economic development and the current account balance, all of these are required. According to published research, a variety of factors, including those related to goods pricing, currency supply, actual activity, currency rates,oil prices, political risks,regional stock markets incices and trade sector (Mwangi 2017).

According to CBK (2023),The agriculture industry in Kenya has continued to play an important role, contributing 20% of the nation’s GDP directly and 27% indirectly through its links to other sectors.In Additionally, it employs more than 40% of the workforce overall and more than 70% of those living in rural areas. Considering how vital this industry is to Kenya's economy in terms of sustaining lives and serving as a food basket, it is imperative to make sure that we assess the role the exchange rate plays in its performance.There are six listed agricultural firms in Kenya (NSE, 2023) see appendix 1.

1.2 Problem Statement

Exchange rates form a critical part of the macroeconomic factors in Kenya's economy. Currently, the Kenyan shilling is experiencing the worst extended decline period of the rapid depreciation since 2008 which has adversely affected economic growth thus impacting the performance of various firms particularly the agricultural firms whose contribution to the country's economy in relation to food security and the creation of employment is very significant.

Studies have been done on the effect of Kenyan shilling depreciation on the economy some have been done to expound on the impacts of foreign exchange exposure /volatility, depreciation, and devaluation on firm performances in the economy. Chirchir (2011) examined how changes in stock prices and currency rates affected Kenya from November 1993 to April 2011. The results show a causal link that is bidirectional between share price and exchange rate. Negative causality exists in both directions with regard to the sign of causality. Musyoka and Pundo (2012) sought to assess the impact of exchange rate volatility on the economic growth of Kenya for the period 1993 -2009 and concluded that the exchange rates exhibited an appreciating volatility trend which negatively impacted on country's overall international competitiveness. Consequently, Otieno (2012) established that exchange rate fluctuation significantly affected the performance of a firm. Regardless of the vast literature on the effect of currency depreciation on economic growth, there are no known studies in the recent past on the effect of currency depreciation on the performance of firms in the agricultural sector. Samuel (2015), however, sought to identify the factors influencing the Nairobi Stock Exchange-listed agricultural firms' performance. This study primarily looked at how factors including liquidity, ownership structure, business size, sales growth, operational cost efficiency, and internal and external variables affected the financial performance of agricultural enterprises listed on the Nairobi Securities Exchange. Thus this paper seeks to assess specifically the effects of currency depreciation on share prices of listed agricultural firms in Kenya in the recent past 2020- 2023.

Objective

To evaluate the impact of currency depreciation on the share prices of Kenyan agricultural firms that are listed between 2020 and 2023.

LITERATURE REVIEW

Theoretical Review

Purchasing Power Parity Theory

The link between a country's foreign exchange rate and the amount of change in its domestic price level relative to a foreign nation is known as purchasing power parity, or PPP.According to (Taylor 2014) The basic principle of purchasing power parity (PPP) argues that if the nominal exchange rate of two currencies is equal to the ratio of the two country's aggregate price levels,

then a unit of currency from one country should have equivalent worth in another. A unit of currency is expected to have the ability to purchase similar range of products in one nation that the same quantity of foreign currency, at the present exchange rate, could purchase in another, according to the purchasing power parity concept.

Empirical Review

Exchange Rate Depreciation

Exchange rates are dictated by the supply and demand of certain currencies. Monetary and fiscal policies of a nation directly influence the supply of domestic currency. several factors, such as inflation,interest rates, and views on upcoming government regulations, can affect the demand for money. Exchange rates have since become one of the key factors influencing corporate profitability and share prices due to the ongoing growth in global commerce and capital flows (Kim, 2013). Given their effect on input and product prices, exchange rate fluctuations have a direct impact on a firm's ability to compete internationally (Joseph, 2012). Because it influences the firm's prospective future cash flows, foreign exchange rate volatility has an impact on the firm's value, which are subject to swings in exchange rates. Importers and exporters will both be impacted by the decline in the exchange rate . Exporters will have a competitive edge over exporters from other nations, which will boost sales and raise stock values. That is to say, for a nation that is dominated by imports or exports, currency depreciation affects the local stock market in a positive way and a negative way, respectively (Patro et al., 2014).

Exchange rates impact domestic and global companies' stock values equally. Given that domestic companies could import some of their inputs and export their final products, fluctuations in exchange rates can also have an impact on them. For example, a company's exports become less costly and its imports become more expensive as its currency depreciates. Depreciation follows.(CBK 2023).

Firms Stock Returns

The common view is that a nation's stock performance serves as a window into its financial and economic state. Stock volatility is a measure of how much share prices fluctuate over a certain time period. It is impossible to entirely avoid market volatility; in fact, some level of volatility is preferable as it allows for more efficient resource allocation and serves as a barometer of shifting values across the economy. However, regular and significant stock fluctuations undermine investor trust by raising questions about the asset's worth (Patro et al., 2014). When prices change sharply, investors who are risk averse or risk neutral may exit the market. Severe volatility ruins the stocks' ability to operate smoothly (Patro et al., 2014).

Relationship between Exchange Rates and Stock Returns

The literature on international finance has a long history of studying the connection between exchange rate changes and stock returns. Research suggests their connection is shaky and hardly

notable. Research have demonstrated that there is a nonlinear correlation between recent changes in stock prices and exchange rate movements. Patro et al. (2014) looked at 41 countries' local stock markets between 1979 and 2011 to see how they responded to central banks' devaluations of their national currencies. They discovered that Local stock markets seem to anticipate devaluations, as seen by the large negative anomalous returns that occur even a year prior to the announcement of the devaluation. After the first announcement, there was a negative trend in stock returns for up to a quarter before turning positive.

Kiguel (2013) studied the exchange rate movement shocks in 23 developing countries of Africa using data from the year 2000 to 2010. According to his findings, there have been a number of exogenous shocks that have hampered macroeconomic management policies, including worsening terms of trade primarily due to changes in global commodity prices, shocks to the price of oil, and volatility in capital flows.

Chirchir (2011) looked at how changes in currency rates and Kenyan stock prices changed between November 1993 and April 2011, and discovered a unidirectional causal link between share price and exchange rate; both paths exhibit negative causality in terms of the sign of causality. Musyoka and Pundo (2012) investigated how Kenya's economic growth was impacted by exchange rate volatility between 1993 and 2009, concluding that the exchange rates showed an appreciating volatility trend which negatively impacted on the country's overall international competitiveness.

Sifunjo and Mwasaru (2012) investigated the link of causation between foreign currency rates and Kenyan stock prices from November 2003 to May 2009.The research has shown that the stock price and foreign exchange rate are integrated in order one and are non-stationary in both first differences and level forms. The study’s findings indicates that exchange rates Granger leads to stock prices in Kenya. There is a unidirectional causality from exchange rates to stock prices.

Nyamute (1998) examined the correlation between Kenyan stock prices and other financial variables, including the money supply, interest rates, inflation rates, and exchange rates. Studies showed a beneficial relationship between stock prices and currency rates.

METHODOLOGY

The paper adopted a descriptive correlational research design which sought to predict and explain the relationship between variables. This design allows for the measurement and analysis of the data through graphs, charts and the computation of mean, standard deviations, and correlation between variables as explained by Cooper & Schindler (2003). To arrive at objective and definitive conclusions for the study, a extensive assessment of the connection between the variables was conducted. The study’s targeted population was all the six listedagricultural

companies at the NSE as of December 2023. There was no sampling done because the population was so small. The paper made use of secondary data that was collected between January 2020 and December 2023 from the Central Bank and Nairobi Securities Exchange.. Since they had data that was critical to this paper and have been reviewed and approved. Data on fluctuations in the value of the Kenyan shilling (Kshs) versus the US dollar (USD) each month was obtained. The monthly stock market returns data was also collected for all the listedagricultural corporations on the Nairobi Securities Exchange for the years 2020–2023 as of December 31, 2023. Using this data, a simple regression analysis was done to establish the extent of the relationship existing betweenstock market performance and exchange rate depreciation.

The following simple regression model was applied in thestudy.

$Yt= a+ B1X1+ Ɛ$

Where Y = the exchange rate depreciation
And X1 = Stock price
a = Constant
B1 = co-efficient of the variables,
E = Error term.
To determine the importance of the independent variable in describing alterations to the dependent variable, a T-test with a 95% confidence level was conducted.

DATA ANALYSIS AND RESULTS

This section presents details of the results analyzed from the consolidated secondary data collected for the years 2020 to 2023. Since the data has taken a panel dimension, the study can tell from the 6 companies considered and the various effects of currency depreciation on stock prices. Tables and graphs are used to display the descriptive study results.

Descriptive Statistics

The standard deviation,mean, maximum and minimum descriptive statistics are all considered in this article. The analysis employed exchange rates and stock prices for every company as its variables. The following is the equivalent in Kenyan shillings of one US dollar: One US dollar is equal to "XX" Kenyan shillings. Therefore, a "increase" in the exchange rate indicates a gain in the foreign currency or a decrease in the value of the Kenyan shilling. The average exchange rate for the time period was determined to be 118.45 by looking at Table 1 below. While the average stock prices of Williamson Tea Kenya, Sasini Plc, Kakuzi Plc, Eagards Ltd, Kapchorua Tea Kenya Plc, and Limuru Tea Co. Ltd
Plc are 12.28,110.49, 378.82,381.00 20.42, and 152.12 respectively.

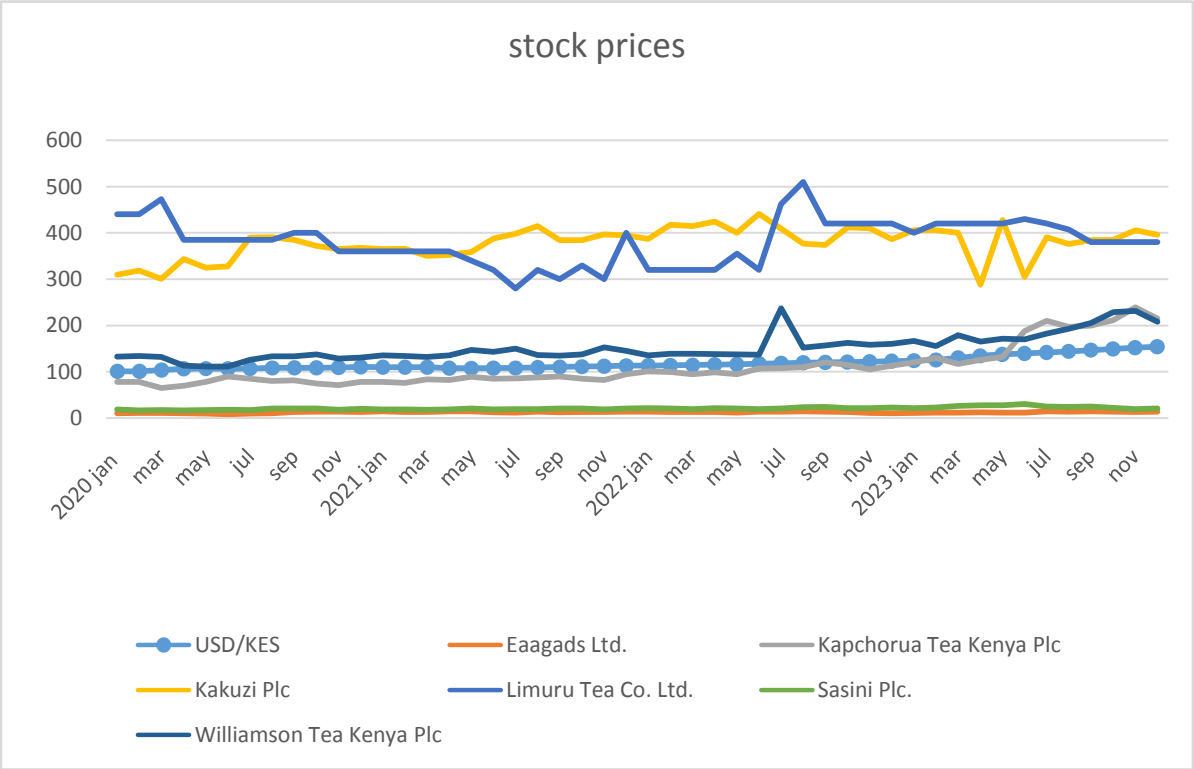
Table 1: Descriptive Statistics

	USD/KES	Eagads Ltd.	Kapchorua Tea Kenya Plc	Kakuzi Plc	Limuru Tea Co. Ltd.	Sasini Plc.	Williamson Tea Kenya Plc
Mean	118.4504167	12.28396	110.492795	378.8233	381.0833	20.41	152.1096
Median	113.145	12.625		385.7	385	20	138.54
Standard Deviation	14.23533317	1.414183	44.51254	35.15371	49.22715	3.034171	29.91743
Sample Variance	202.6447105	1.999914	1981.366	1235.783	2423.312	9.206196	895.0526
Kurtosis	0.332759954	-0.07146	1.596494	0.321926	-0.14896	1.393826	1.544427
Skewness	1.173845282	-0.76059	1.623158	-0.87383	0.107795	1.137395	1.374258
Minimum	100.79	8.24	65	288.5	280	16.1	110.91
Maximum	154.09	14.1	239.25	441.25	510	30	236.9
Count	48	48	48	48	48	48	48
Confidence Level (95.0%)	4.133509874	0.410636	12.92509	10.20757	14.29407	0.881032	8.687116

Trend Analysis

The study used graphical representations to show how all the variables trended over the course of the investigation across all the panels. An rising trend in exchange rates is indicative of a depreciating currency. While stock prices exhibit an upward trend in all the companies.

Figure 1: Trends in Exchange Rates and Stock Prices



ANOVA Test

For the purpose of evaluating the model's importance, we adopted the Analysis of Variance (ANOVA) approach. The table below is a tabulation of the results. From the ANOVA statistics, the review was set up. The relapse demonstration had a significance level of 2.1267% meaning that the data was practical in drawing conclusions about the population parameters since the estimated p-value (significance level) was less than 5%. The ANOVA table 2 reports an F test value of 65.102 which is Significant at p value 5.4E215 = 0. This is an indication that exchange rates influence stock performances. The significance value was equivalent to 0.05 indicating that the model was significant.

Table 2 ANOVA

ANOVA

Source of Variation	*SS*	*Df*	*MS*	*F*	*P-value*	*F crit*
Between Groups	6665995	6	1110999	65.102	5.4E-215	2.126772
Within Groups	307047.5	322	953.5636			
Total	6973043	328				

Multi collinearity test

Table 3 below shows a constructive correlation between exchange rates and independent variables as well as the independent variables. The study also undertook a variance inflation factor (VIF) test to confirm the absence of multi collinearity, which may bring spurious results.

Table 3: Correlation and Multi collinearity

	USD/ KES	*Eaagads Ltd.*	*Kapchorua Tea Kenya Plc*	*Kakuzi Plc*	*Limuru Tea Co. Ltd.*	*Sasini Plc.*	*Williamson Tea Kenya Plc*
USD/KES	1						
Eaagads Ltd.	0.2812 63538	1					
Kapchorua Tea Kenya Plc	0.9583 02582	0.2804 30298	1				
Kakuzi Plc	0.2228 14233	0.3249 70832	0.17063498 4	1			
Limuru Tea Co. Ltd.	0.2339 88965	-0.1900 10139	0.20674216 9	-0.3524 5	1		
Sasini Plc.	0.6693 3182	0.1765 90031	0.56689126 3	0.0692 29	0.339651	1	
Williamson Tea Kenya Plc	0.8428 71706	0.3755 40277	0.82889603 9	0.2841 61	0.279763	0.498 203	1

Regression Results

After conducting major tests where necessary, the final random effects model takes the following form based on the results in Table 4

Table 4: Regression Results

	IDV	*DV*
IDV	198.4229	
DV	0.094955	1

$Y_{i,t}$ = 198.422+ 0.0949x_1+ 3

Where;

$\mathbf{Y_{it}}$= = currency depreciation measured by monthly average price of exchange rates.

The increase by a unit in exchange rates results in a change in stock by 0.094. This means that stock prices increase by 9.49%.

CONCLUSION AND RECOMMENDATIONS

Based on the study findings presented it is evident that the shilling has drastically depreciated against the dollar while stock prices exhibited a price increase as shown in the graphs above. Table 4 above through the linear model, exchange rate and demonstrated to be a stock price driver that was statistically substantial. at 5% and 1% significance level. The study found out that a change per unitin exchange rates causes a shift in stock price by 0.094. This means that stock prices increase by 9.49%. This implies a weak positive relationship linking stock prices and exchange rates thus exchange rates alone cannot be used to explain stock price volatility. This is in line with Mwangi, (2017) who explained Many variables, including the price of commodities, economic activity, currency supply, exchange rates, the prices of oil, trade sector, and regional stock market indices, may be important in understanding the volatility of stock prices.

Therefore portfolio managers are charged with improving their customers' wealth, sudden shift in share prices brought on by a decline in foreign exchange rates may send shivers down their spines. This may drive them to sell off a portion of their portfolio assets, which would cause the stock market to crash. Nonetheless, the portfolio of stock securities could increase in value as the foreign currency falls. As a result, it is critical that portfolio managers understand the link between share prices and currency rates in great detail.As such, a deep comprehension of the correlation between currency rates and share prices is crucial for portfolio managers. Portfolio managers would be better served, according to the paper's findings, by increasing their levels in equity companies when they anticipate a foreign exchange rate decline and selling portfolio shares if they anticipate an appreciation.

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