

MACROECONOMIC VARIABLES AND SHARE PRICE MOVEMENTS IN NIGERIA BREWERY INDUSTRY: EVIDENCE FROM GUINNESS BREWERIES PLC.

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ABSTRACT: *The aim of the research is to validate the relationship between macroeconomic variables and the movement of share prices in Nigeria brewery industry. The level of association of the variables is evaluated using the ordinary least squares method, modeled in form of multiple regression. Granger causality method was applied to examine the causality relationship among the variables in the short run. Augmented Dickey- Fuller (ADF) test was conducted while the Phillip-Perron's (PP) test was applied for robustness check for stationary of the data series. All the variables except interest rate had the data series differenced at second difference. Interest rate was differenced at level and intercept. Significant relationship was found between inflationary rate and share price as well as between real gross domestic product and share price as about 95% of the variations in share price could be explained by the independent variables. Positive and strong correlation exists between share price and real GDP as well as exchange rate while a weak and negative correlation is found between share price and interest rates. A strong and negative correlation exists between inflationary rate and share price. No causal relationship is indicated by Granger causality test in the short run. The paper recommends that in the pursuit of the millennium development goals and the realization of transformation agenda of the federal government of Nigeria, the planners of the economy should take the interactions of these macroeconomic variables and share prices into consideration in setting fiscal, monetary and other economic and investment policies.*

KEYWORDS: Macroeconomics, Brewery, Share Prices, Regression, Causalities

INTRODUCTION

Brewery industry in Nigeria is still emerging when compared with its contribution to world beer market in general and African beer market in particular. It was stated in Vetiva (2010) that Africa accounts for an insignificant 5% of global beer production while Nigeria the Nigeria beer industry accounts for an unsatisfactorily small share of precisely 0.8%. However the brewery sector is one of the most viable sectors in Nigeria and contributes remarkably to the economic development and growth of Nigeria supports. Apart from the federal, state and local government authorities in Nigeria, the brewery industry may be the next highest employer of labour. Ola(2001) in Okwo, Agu and Ugwunta (2012) noted that this sector contributes about 28 percent of Manufactured Value Added (MVA) and provides employment directly for over 30,000 Nigerians and expatriates and indirectly for about 300,000 persons.

About 1949, the brewery sector in Nigeria was still at incubation stage as the production of beer in quantity that is marketable just started that year with Nigeria Breweries Plc leading with the establishment of its first brewery at Igunlu in Lagos. Vetiva (2010) emphasized that the four global players that are currently operational in the Nigerian brewery industry includes Guinness Nigeria Plc (Guinness), Consolidated Breweries, Nigeria Breweries and International Breweries Plc.

Golden Guinea joined the brewery industry in 1962, Guinness Nigeria Plc also joined in 1962 and in 1964, West African Breweries followed while North Breweries joined in 1970.

Guinness Nigeria Plc is a subsidiary of Diageo Plc with headquarters in United Kingdom. The company was incorporated in 1962 and on that year constructed its first brewery within Nigeria at Ikeja, Lagos and subsequently in 1974 and 1982 built breweries in Benin City and Ogba respectively. The company however has breweries in Ireland and Great Britain.

Guinness Nigeria Plc was described in their official website as not only regarded an iconic African company, renowned internationally for its brands of unmatched quality, but also as a company that believes in enriching the communities within which it operates, through investment and active participation in the positive evolution of society. Vetiva (2010) reveals that the stout brand of Guinness Nigeria Plc is a market favorite, with Nigeria ranking as the second largest market for the Guinness Stout brand world-wide and though there are handful marginal players, the market is dominantly driven by Nigerian Breweries Plc and Guinness Nigeria Plc with a combined market share of 80%.

However, the firm's earnings and businesses are influenced by general economic conditions, the performance of the financial markets, inflationary rates, money supply, interest rates, foreign currency exchange rates, changes in laws, regulations and policies of the Central Bank, capital market and other regulators as well as competitive factors on a global, federal, state and local government basis (Vanguard, 2007). This is why Naik and Padhi(2012) submits that the stock market avail long-term capital to the listed firms by pooling funds from different investors and allow them to expand in business and also offers investors alternative investment avenues to put their surplus funds in as they carefully watch the performance of stock markets.

Stock price movements as Aldin, Dehnavi and Entezari(2012) opines, are likely to be influenced by many macroeconomic factors including political events, firms' guidelines, general economic situations, inventory price index, investors' expectations, institutional investors' selections and psychological factors. Citing Wang, Wang, Zhang and Guo (2011), the scholars concludes that the accurate prediction of stock price movements is a very challenging and important issue which the investors extensively regard in their investment decisions. Some of these factors which pivot around the forces of demand and supply, may also determine whether a stock market is bearish or bullish.

This paper therefore seeks to examine the extent to which foreign exchange rate, inflationary rate, real gross domestic product and interest rate relate with share prices in Nigeria Brewery Sector. The rest of this work is divided into four sections. Section 2 deals with the review of related literature, Section 3 focuses on the methodology for data analysis while section 4 presents the empirical results and discussion. Section 5 however concludes the study.

REVIEW OF RELATED LITERATURE

Theoretical Framework

Many divergent views trail the issue of stock price determination and the factors responsible. The proponents of efficient market hypothesis are of the view that stock prices would be determined primarily by fundamental factors such as earnings per share, dividend per share, payout ratio, size of the firm and dividend yield, management and diversification (Srinivasan, 2012). However, sequel to information asymmetry, stock market information may not be available to all stakeholders at the same time. Citing Copeland and Weston (2005), Khan(2009) submits that the source of the information asymmetry is the superior knowledge that managers have about the firm's prospects, while the investors in the firms comprise the uninformed group.

Consequently, the deficiency of Efficient Market Hypothesis gave rise to the emergence of the Arbitrage Pricing Model. The multifactor model as opine by Saeed and Akhter (2012) is based upon the assumption that many macroeconomic factors such as Consumer Price Index, Interest Rate, Industrial Production, Exchange Rate, Risk Free Rate and Money Supply are involved in the determination of risk and return relationship. Hence, the Arbitrage Pricing Theory is the theory underpinning this study.

Empirical Review

Using Augmented Dickey Fuller (ADF) test and estimate of error correction mechanism model, Odior(2013) investigates the impact of macroeconomic factors on manufacturing productivity in Nigeria. The cointegrating equation of the VECM reveals the presence of a long-run equilibrium relationship. Loans and advances and foreign direct investment have positive and significant impact on the level of manufacturing productivity in Nigeria, while broad money supply has less impact. It recommends that government should create the right environment for manufacturers in the area of infrastructure, financial, legal and property rights.

Granger Causality model was applied after removing the effect of unit root from the data series by Rasool, Fayyaz, Mumtaz (2012) in assessing the causal relationship between the stock price index of KSE (Karachi Stock Exchange) and Exchange Rate (ER), Foreign Exchange Reserves (FER), Industrial Production Index (IPI), Interest Rate (IR), Imports (M), Money Supply (MS), Wholesale Price Index (WPI) and Exports (X). It was revealed that macroeconomics variables and stock prices relate even in the long-run as supported by Naik and Padhi(2012). FER, IR, M, MS and WPI relate positively and significantly with stock prices, while ER and X show a negative and insignificant association with stock prices. IPI has a negative but significant relationship with stock prices. Granger Causality reveals that MS and WPI have bi-directional relation; ER, FER and M have uni-directional relationship while IPI, IR and X shows no casual relationship with stock prices.

Olugbenga (2011) examines the impact of macroeconomic indicators such as money supply, interest rate, exchange rate, inflation rate, oil price and gross domestic product on stock prices in Nigeria using the pooled or panel model. The result reveals that macroeconomic variables have varying significant impact on stock prices of individual firms in Nigeria.

The vector error correction model (VECM), (Johansen (1991)) is utilized by Adel(2004) to determine the impact of selected macroeconomic variables such as real economic activity, money supply, inflation, and interest rate on Amman Stock Exchange (ASE). The result reveals that the stock prices and macroeconomic variables have a long-term equilibrium relationship as supported by Odior(2013) and Naik and Padhi(2012).

Using Ordinary Least Square (OLS), the performance of the Arbitrage Pricing Theory (APT) in the Nigerian Stock Exchange (NSE) was examined by Izedonmi and Abdullahi(2011). Inflation, exchange rate and market capitalization were specially considered and the findings reveal that there are no significant effects of those variables on the stocks' return in Nigeria.

The relationship between interest rates, consumer price index, money supply, exchange rate, gold prices, oil prices, current account deficit, export volume and Istanbul Stock Exchange (ISE) industry index is examined by Ozcan(2012) using the Johansen's cointegration test. The test result reveals that macroeconomic variables exhibit a long run equilibrium relationship with the ISE industry index as supported by.

In a related study, Mwangi(2013) tries to determine the effects of macroeconomic variables such as real exchange rate, GDP growth rate, the change in money supply (M3), average annual lending interest rates and inflation rate measured by annual percentage changes in the consumer price index (CPI) on financial performance (proxied by Return on Assets (ROA)) of aviation industry in Kenya. The results reveal that ROA has weak positive insignificant correlation with gross domestic products growth rate and annual change in money supply M3 while a weak negative insignificant correlation exist between ROA and exchange rate, annual average lending rate and annual average inflation.

The relationship between industrial production index, wholesale price index, money supply, treasury bills rates, exchange rates and Indian Stock Index was examined by Naik and Padhi(2012) applying Johansen's co-integration and vector error correction as well as Granger Causality model. The result, in line with the Arbitrage Pricing Model, reveals that macroeconomic variables and the stock market index are co-integrated and hence, a long-run equilibrium relationship exists between them. Stock prices relate positively to money supply and industrial production but negatively relate to inflation while exchange rate and interest rate are insignificant determinants. Granger causality test reveals that macroeconomic variable causes the stock prices in the long-run. Bidirectional causality exists between industrial production and stock prices whereas, unidirectional causality runs from money supply to stock price, stock price to inflation and interest rates to stock prices are found.

In an effort to validate the impact of macroeconomic factors such as Money Supply, Exchange Rate, Industrial Production, Short Term Interest Rate and Oil prices on banking index within Arbitrage Pricing context, Saeed and Akhter(2012) using regression approach carried out the empirical analysis. The analysis results indicate that Oil Prices, Exchange Rate and Short Term Interest Rate have significant impact on Banking index while Money Supply, Exchange Rate, Industrial Production and Short Term Interest Rate show a negative relationship with banking index.

The above review of related literature is an indication that there are varying results from different countries, sectors and firms within the same industry. In Nigeria which is an emerging economy, there is dearth of empirical study on the relationship between macroeconomic variables and stock prices, especially in the brewery sector. This study is aimed at examining the extent to which interest rate, inflationary rate, foreign exchange rate and real gross domestic product relate with share prices of firms within the Nigeria brewery sector.

DATA AND METHODOLOGY

Data

Annual data was obtained for interest rate, inflation rate, foreign exchange rate and gross domestic product from various issues of Central Bank of Nigeria (CBN) statistical bulletin especially the 50 years special anniversary edition while share prices as at 31st December of each year under consideration was extracted from Nigeria Stock Exchange website.

Table 1: Description of Variables under Study

INFRATE	Inflationary Rate(All items, Year on Change)
INTRATE	Interest Rate
EXCHRATE	Exchange Rate
RGDP	Real Gross Domestic Product
SHPRICE	Share Price

Methodology

The relationship between interest rate, inflation rate, foreign exchange rate, gross domestic product and share prices of quoted brewery firms in Nigeria is examined in this study, in a bivariate causality framework. The study employed an econometric model in data analysis that is consistent with the studies done by Naik and Padhi(2012), Rasool, Fayyaz, Mumtaz (2012), Odior(2013), Saeed and Akhter(2012), Izedonmi and Abdullahi(2011) and Ozcan(2012). Augmented Dickey Fuller (ADF) and Phillips Perrons'(PP) Test is applied to test for stationary of the time series data. Phillip-Perrons' test, which produces firm estimates even in the presence of serial correlation and heteroskedasticity that is time dependent, was conducted following the proof by Monte Carlo simulations as cited in Newey and West (1987) that ADF has a low power that impairs its ability to succinctly distinguish non-stationary from stationary series especially when the series have high degree of autocorrelation The Granger causality test and the Johansen (1988) co-integration test are applied to test for causality between each pair of the variables and long-run relationship between the macroeconomic variables and share prices respectively. Augmented Dickey-Fuller test and Phillips Perrons'(PP) Test reject a null hypothesis of unit root if the series are non-stationary and accept the alternate hypothesis of stationary.

Granger-causality is normally tested in the context of linear regression models and specified as follows in our bivariate linear autoregressive model of two variables X_1 and X_2 based on lagged values as applied by Pasquale (2006) and cited in Inyama(2013):

$$X_1(t) = \sum_{j=1}^P A_{11,j} X_1(t-j) + \sum_{j=1}^p A_{12,j} X_2(t-j) + E_1(t)$$

$$X_2(t) = \sum_{j=1}^P A_{21,j} X_1(t-j) + \sum_{j=1}^p A_{22,j} X_2(t-j) + E_2(t)$$

Where;

p is the maximum number of lagged observations included in the equation, the matrix A contains the coefficients of the equation (i.e., the contributions of each lagged observation to the predicted values of $X_1(t)$ and $X_2(t)$,

X_1 is the share price which is constant while X_2 takes the form of various macroeconomic indices identified above and,

E_1 and E_2 are residuals (prediction errors) for each time series.

The primary model showing the relationship between interest rate, inflation rate, foreign exchange rate, gross domestic product and share prices of quoted brewery firms in Nigeria is specified below:

Shprice = f (Intrate, Infrate, Exchrates, Rgdp)

$$Shprice = \alpha_0 + \alpha_1 Intrate + \alpha_2 Infrate + \alpha_3 Exchrates + \alpha_4 Rgdp + \epsilon_t$$

To examine the relationship between Share Price and Interest Rate, Inflation Rate, Foreign Exchange Rate and Real GDP as adopted in Inyama(2013), the multiple regression equation is estimated in the form:

$$SHPRICE_t = K + \beta_1 INTRATE_t + \beta_2 INFRATE_t + \beta_3 EXCHRATE_t + \beta_4 RGDP_t$$

Where

INFRATE_t = Inflation Rate in time t (All items, Year on Change)

INTRATE_t = Interest rate in time t

EXCHRATE_t = Exchange rate in time t.

RGDP_t = Real Gross domestic product in time, t.

SHPRICE = Share Price in time, t.

α_0 is a constant term, 't' is the time and 'ε' is the random error term.

DISCUSSION OF FINDINGS

The data series is expected to be stationary to ensure the absence of unit root problems. To achieve stationary of the data series, the data for the analysis are examined using the Augmented Dickey-Fuller (ADF) test (Dickey and Fuller 1981) unit root tests which is complemented for robustness of the estimates with the Phillip – Perrons(PP) Test.

When the time series data which includes share price, exchange rate, inflation rate, interest rate and real GDP series were checked for stationary, the graphs reveal that there are unit root problems. The graphs were plotted to give the researcher initial signal as to the existence of unit root in the series as the line graphs failed to cross the zero line severally.

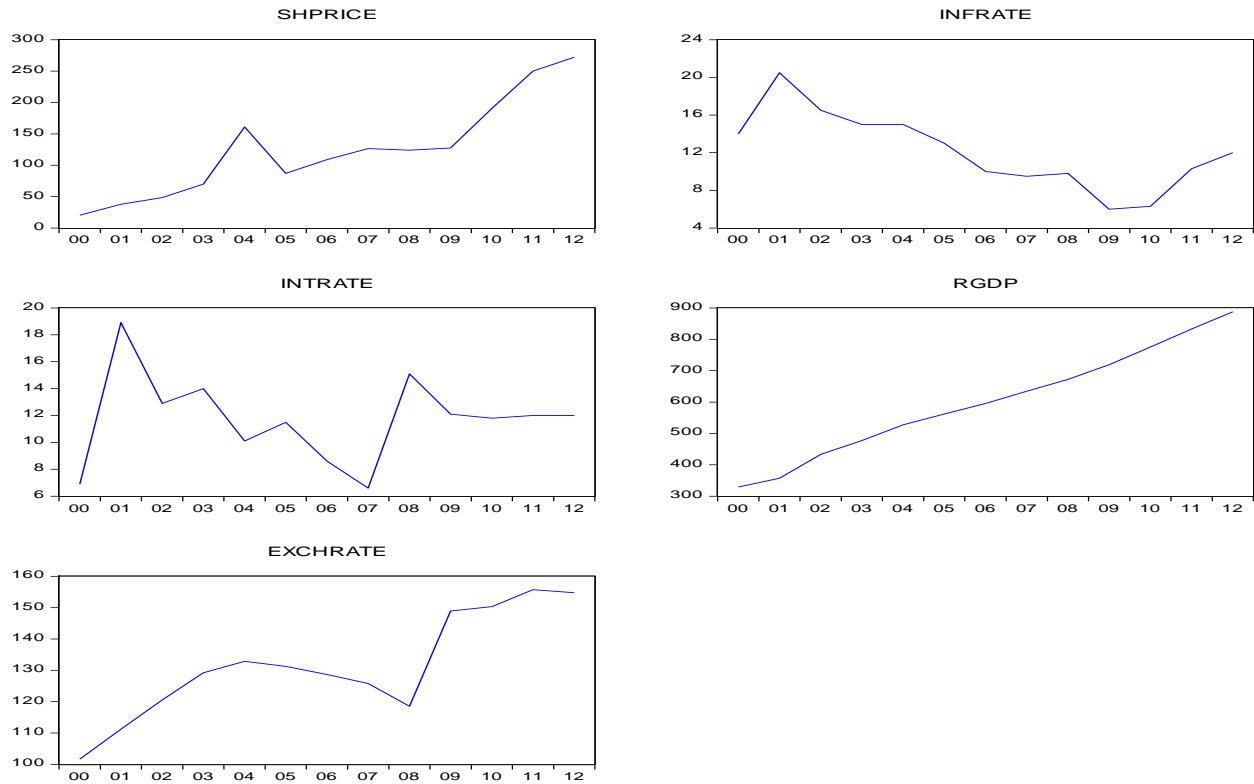


Figure 1: Graphical Representation of the Variables with Unit Root Issues

Source: Author's EView 8.0 Output.

Table 2: Augmented Dickey- Fuller (ADF) Test Results

Variable	Test Critical Values			ADF Stat	Status
	1%	5%	10%		
Share Price	-5.835186	-4.246503	-3.590496	<u>-7.301497</u>	1(2)
Inf. Rate	-2.847250	-1.988198	-1.600140	-4.550151	1(2)
Int. Rate	-4.121990	-3.144920	-2.713751	-4.315037	1(0)
Real GDP	-5.295384	-4.008157	-3.460791	-12.39939	1(2)
Exch. Rate	-4.297073	-3.212696	-2.747676	-5.453782	1(2)

Source: Author's EView 8.0 Computation

Table 3: Phillip- Perrons’ Test Results

Variable	Test Critical Values			ADF Stat	Status
	1%	5%	10%		
Share Price	-4.297073	-3.212696	-2.747676	-11.68823	1(2)
Inf. Rate	-2.816740	-1.982344	-1.601144	-8.777988	1(2)
Int. Rate	-4.121990	-3.144920	-2.713751	-4.185672	1(0)
Real GDP	-5.295384	-4.008157	-3.460791	-11.97531	1(2)
Exch. Rate	-4.297073	-3.212696	-2.747676	-8.288309	1(2)

Source: Author’s EView 8.0 Computation

It is revealed in Tables 2 and 3 that the data series of share price, rate of inflation, real gross domestic product and foreign exchange rate are not originally stationary but attained that status at second difference. The data series for Interest rate achieved stationary at level and intercept. However differentiation, new data series devoid of unit root characteristics was computed for subsequent analysis.

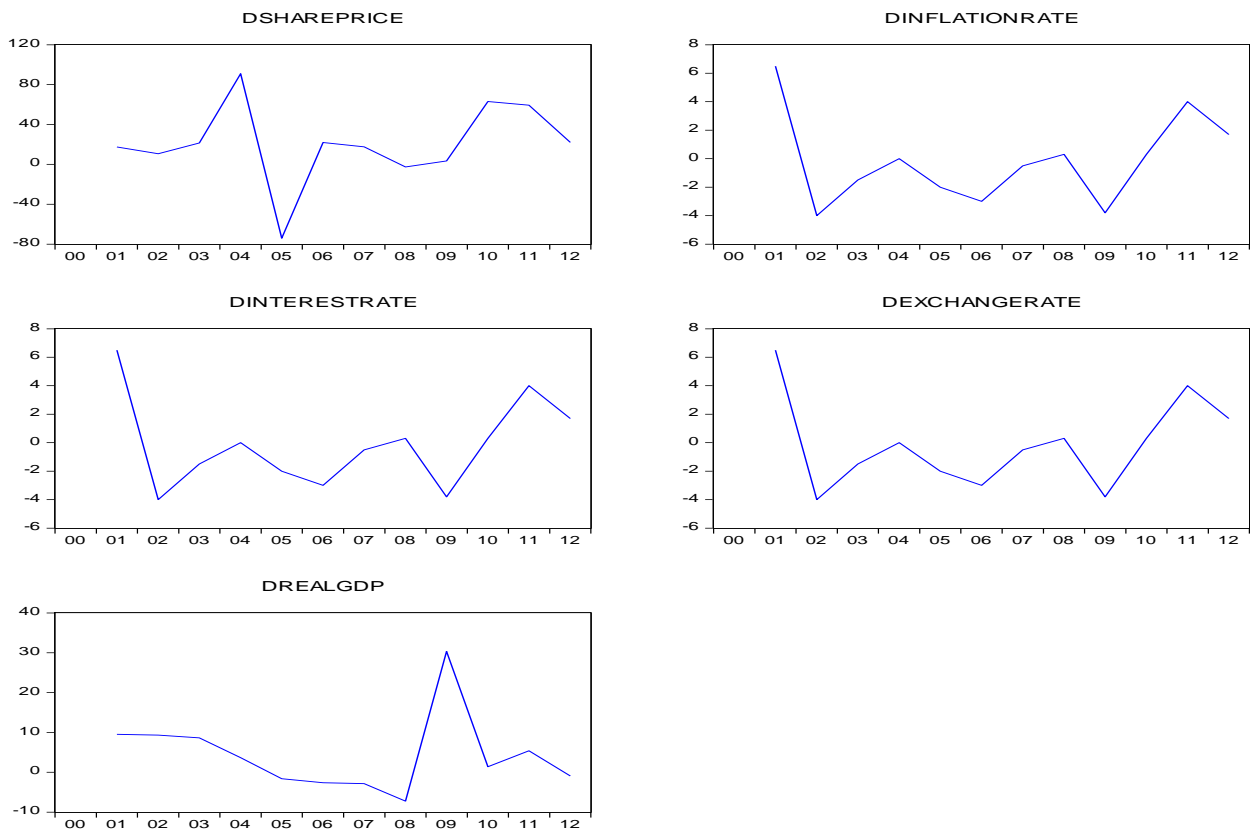


Figure 2: Graphical Representation of the Variables without Unit Root Issues

Source: Author’s EView 8.0 Output

Figure 2 above clearly illustrates that the new data series after differentiation are free from unit root challenges as the line graphs crossed the zero line a number of times.

Table 4: DESCRIPTIVE STATISTICS

	SHARE PRICE	INFLATION RATE	INTEREST RATE	REAL GDP	EXCHANGE RATE
Mean	124.9523	12.14615	11.73077	600.2962	131.5054
Median	124.0000	12.00000	12.00000	595.8000	129.2200
Maximum	272.1200	20.50000	18.90000	887.8600	155.7000
Minimum	20.40000	6.000000	6.600000	329.2000	101.7000
Std. Dev.	77.45417	4.099719	3.313202	175.6768	16.87423
Skewness	0.559385	0.301339	0.327360	0.040590	0.002673
Kurtosis	2.398777	2.582678	3.101436	1.978588	2.064057
Jarque-Bera	0.873771	0.291079	0.237763	0.568681	0.474510
Probability	0.646045	0.864556	0.887913	0.752510	0.788790
Sum	1624.380	157.9000	152.5000	7803.850	1709.570
Sum Sq. Dev.	71989.77	201.6923	131.7277	370347.9	3416.876
Observations	13	13	13	13	13

Source: Author's EView 8.0 Computation

The descriptive statistics as shown above displays the mean values of the dependent and independent variables as well as other values such as maximum, minimum, standard deviation and other values. The table reveals that all independent and dependent variables have skewness coefficient less than 1 indicating a normal frequency distribution. This is further proved by the coefficient of kurtosis which disclosed values less than 4 in each case. Since all the probability values are not significant amongst all the variables, it confirms a normal frequency distribution. A volatile standard deviation is indicated by real GDP.

Table 5: Dependent Variable: SHAREPRICE

Method: Least Squares

Date: 04/12/14 Time: 11:08

Sample: 2000 2012

Included observations: 13

Variable	Coefficient	Std. Error	t-Statistic	Prob.
INFLATIONRATE	9.239515	2.659439	3.474235	0.0084
INTERESTRATE	-4.752441	2.218878	-2.141822	0.0646
EXCHANGERATE	0.668267	0.820010	0.814950	0.4387
REALGDP	0.502529	0.095451	5.264778	0.0008
C	-321.0695	78.20683	-4.105389	0.0034
R-squared	0.948138	Mean dependent var	124.9523	
Adjusted R-squared	0.922207	S.D. dependent var	77.45417	
S.E. of regression	21.60302	Akaike info criterion	9.267266	
Sum squared resid	3733.525	Schwarz criterion	9.484555	
Log likelihood	-55.23723	Hannan-Quinn criter.	9.222604	
F-statistic	36.56398	Durbin-Watson stat	2.600564	
Prob(F-statistic)	0.000035			

Source: Author's EView 8.0 Computation

$$\text{Equation: Share Price} = -321.0695 + 9.239515 (\text{INFRATE}) - 4.752441 (\text{INTRATE}) + 0.502529 (\text{RGDP}) + 0.668267 (\text{EXCHRATE}) + et$$

The Table 5 above indicates that positive relationship exists between share price and inflation rate, foreign exchange rate and real gross domestic product. However, a negative relationship exists between interest rate and share price. Significant relationship was found between inflationary rate and share price as well as between real gross domestic product and share price. About 95% of the variations in share price could be explained by the independent variables while about 15% variations could be explained by other factors, the error term and issues that occur as a matter of chance. The studies conducted by Olugbenga (2011), Odior(2013) and Naik and Padhi(2012) lend support to the findings of this work. Saeed and Akhter(2012) in their study also found a negative relationship between interest rate and bank index in line with this study.

Table 6: Correlation Results

	SHARPRICE	INFLATIONRATE	INTERESTRATE	EXCHANGRATE	REALGDP
SHAREPRICE	1.000000	-0.514318	-0.086341	0.872093	0.925727
INFLATIONRATE	-0.514318	1.000000	0.410014	-0.588119	-0.732053
INTERESTRATE	-0.086341	0.410014	1.000000	-0.009729	-0.072076
EXCHANGRATE	0.872093	-0.588119	-0.009729	1.000000	0.888002
REAL GDP	0.925727	-0.732053	-0.072076	0.888002	1.000000

Source: Author's EView 8.0 Computation

Table 6 indicates that a positive correlation exists between share price and exchange rate as well as real gross domestic product while negative correlation exists between inflationary and interest rates and the share price. A strong correlation is found to exist between inflationary rate and share price (51.4%), real GDP and share price (92.5%) and exchange rate and share price (87%). There is a very weak correlation between interest rate and share price (8.6%). The study carried out by Adel(2004) supports the result of this study while Izedonmi and Abdullahi(2011) disagrees to a large extent with the findings.

Table 7: Pairwise Granger Causality Tests

Date: 04/12/14 Time: 11:19

Sample: 2000 2012

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
DINFLATIONRATE does not Granger Cause DSHAREPRICE	10	0.11678	0.8921
DSHAREPRICE does not Granger Cause DINFLATIONRATE		0.59500	0.5864
DINTERESTRATE does not Granger Cause DSHAREPRICE	10	0.11678	0.8921
DSHAREPRICE does not Granger Cause DINTERESTRATE		0.59500	0.5864
DEXCHANGERATE does not Granger Cause DSHAREPRICE	10	0.11678	0.8921
DSHAREPRICE does not Granger Cause DEXCHANGERATE		0.59500	0.5864
DREALGDP does not Granger Cause DSHAREPRICE	10	1.83916	0.2520
DSHAREPRICE does not Granger Cause DREALGDP		0.05094	0.9508

Source: Author's EView 8.0 Computation

Table 8: Pairwise Granger Causality Tests

Date: 04/12/14 Time: 11:24

Sample: 2000 2012

Lags: 1

Null Hypothesis:	Obs	F-Statistic	Prob.
DINFLATIONRATE does not Granger Cause DSHAREPRICE	11	0.16609	0.6943
DSHAREPRICE does not Granger Cause DINFLATIONRATE		3.42474	0.1014
DINTERESTRATE does not Granger Cause DSHAREPRICE	11	0.16609	0.6943
DSHAREPRICE does not Granger Cause DINTERESTRATE		3.42474	0.1014
DEXCHANGERATE does not Granger Cause DSHAREPRICE	11	0.16609	0.6943
DSHAREPRICE does not Granger Cause DEXCHANGERATE		3.42474	0.1014
DREALGDP does not Granger Cause DSHAREPRICE	11	1.74240	0.2234
DSHAREPRICE does not Granger Cause DREALGDP		0.10013	0.7598

Source: Author's EView 8.0 Computation

Tables 7 and 8 indicate that there is no causal relationship between share price and any of the independent variables under study at 1 and 2 year lagged periods which are both in a short run. Rasool, Fayyaz, Mumtaz (2012), Ozcan(2012), Naik and Padhi(2012) and Izedonmi and Abdullahi(2011) agree with this position. In all these studies, no short run relationship was indicated by the causality test. However, they provide evidence of a long run relationship between the independent variables (interest rate, inflationary rate, exchange rate and real GDP) and the dependent variable (share price).

CONCLUSION

Macroeconomic indicators are very crucial in planning the Nigeria economy. This is because the indicators are supposed to determine the growth and development of the economy as well as key institutions within it. Knowledge about pattern of movement in share prices is the toast of proposed and current investors in Nigeria brewery industry. The financial consultants and the stock brokers need to determine the trend in share price movement within an industry to enable them forecast as well as project into the future to speculate for investment in shares on behalf of and for the benefit of their clients. This information is also relevant to research institutes, Central Banks, the planning commission, professional associations, the financial reporting council, budget office, capital market, academic institutions, world bank and so on, for setting attainable goals and strategies.

The research reveals that positive relationship exists between the dependent variable (share price) and the independent variables (inflation rate, foreign exchange rate and real gross domestic product) while negative relationship exists between interest rate and share price. Significant relationship was found between inflationary rate and share price as well as between real gross domestic product and share price as about 95% of the variations in share price could be explained by the independent variables. Positive and strong correlation exists between share price and real GDP as well as exchange rate while a weak and negative correlation is found between share price

and interest rates. A strong correlation exists between inflationary rate and share price (51.4%). There is no causal relationship between share price and any of the independent variables under study in the short run.

Inflationary rate and real GDP are therefore key determinants of share price movements in the Nigeria brewery sector with special emphasis on Guinness Nigeria Plc. This means that reasonable predictions as to share price changes could be made by the analysis of fluctuations in inflation rates and real GDP. The direction and weight of the relationship between share price and interest and exchange rates is also of paramount importance to planners of the economy considering the multiplier effect of less than a naira fluctuation in these macroeconomic variables on the growth and development of the Nigeria economy.

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