THE EFFECT OF POLITICAL RISK ON STOCK MARKET RETURN AND VOLATILITY IN NIGERIA.

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Abstract

Macroeconomic variables have systematic effects on stock market performance because asset prices depend on their exposure to the fundamental variables describing the economy. Any systematic variable that affects the economy at the same time affects the return of a single stock, and consequently the stock market return as a whole. Therefore, this study examines the effect of political risk on stock market return and volatility in Nigeria. The study employed causal research design and the population of the study consists of all the one hundred and eighty four companies listed in the Nigerian Stock Exchange as at 31st December, 2018. The sample of the study covers the period of thirty-four years from 1985 to 2018. Data were collected through secondary sources of Central Bank of Nigeria Statistical Bulletin, Securities and exchange commission and World Bank Data Indicator. Generalised Autoregressive Conditional Heteroscedasticity (GARCH) was used to analyse the data. Findings revealed that political risk has effect on stock market return and volatility but, this effect was found to be insignificant. Also, the study found that political risk has linear relationship with the stock market returns and volatility. This implies that political risk affect stock market returns the same way as it affect stock market volatility. The study partially conform with arbitrage theory which postulate that political risk is one of the fundamental macroeconomic variables which constitute new information on the stock market return and volatility. The study concludes based on the findings that political risk has effect on stock market return and volatility. In view of this, the study recommends that Government should formulate policies that will promote greater performance of stock market in terms of increase in stock return and decrease in stock market volatility.

Keywords: Political Risk, Stock Market Return, Macroeconomic variables, Stock Market Volatility, Nigerian Stock Exchange,

1. Introduction

A stock market is an integral part of a country's financial system that guarantees the financial development and growth of that country. A well organized and managed stock market encourages investments by identifying and supporting those productive projects that will ultimately lead to economic development. Stock market plays essential roles in growing industries that ultimately affect the economy such as transferring available funds from units that have excess funds (savings) to those who are suffering from funds deficit (borrowings) (Padhi & Naik, 2012). The stock market is an avenue which facilitates all the key prospects of the financial system, such as capital mobilization, investing opportunities, risk distribution and exerting corporate control. According to Olweny and Kimani (2011), a stock market facilitates the investment of surplus funds into additional financial instruments that better match their liquidity

preference and risk appetite. Thus, the stock market becomes a channel for the mobilization of investible funds. As a result, the savings rate is increased, investment is stimulated, and earning returns to owners through increased capital gains. Thus, the stock market acts as a catalyst for economic growth, mobilization of investible funds, diversification of portfolio by corporate and individual investors, and availing investible funds to corporate entities for optimal utilization.

The primary and secondary segments of the Nigerian equity market witnessed more profound growth than any other sector during 2006 and 2007, and attracted unprecedented awareness and a huge influx of capital flow, which can be traced back to some previously enforced regulations such as: the banking and insurance sector consolidation, the pension sector reform, improved macroeconomic environment including external debt cancellation, foreign reserve build-up and favourable sovereign credit rating, improved public awareness and consequent speculative activities, increased foreign investor interest, easy access to credit and subsequent consolidation, especially by stockbrokers. As a result, the Nigerian Stock Exchange Index posted a return of 38% and 75% in 2006 and 2007 respectively (Sally, 2011). Macroeconomic variables have systematic effects on stock market performance this is because asset prices (such as equity, bond, etc.) depend on their exposure to the fundamental variables describing the economy. Any systematic variable that affects the economy at the same time affects the return of a single stock, and consequently the stock market return as a whole. (Hillier, Ross, Westerfield, Jaffe, & Jordan, 2010). This is because the return on a stock consists of two parts, the expected return and the unexpected or risky return.

The expected return is the portion of the return that investors predict and consists of all the information that the investors have about the company; it is the known part. The second part is the unexpected or risky return and is the part of information that is influenced by surprises within the coming period. Since the investors have already accounted for the expected part, the uncertain portion of the return is the systematic risk which is about the general economic situation. Macroeconomic factors such as interest rates and exchange rates are examples of systematic risk; these factors influence all companies to some degree and it is important to understand and identify the risk factors that affect the stock markets performance in emerging economies such as Nigeria and to recognise in time any destabilising forces in the markets, which can cause financial instabilities and lead to country defaults and equity market crashes. In spite of this, relationship between variations in macroeconomic variables and stock market returns has not been unidirectional. Various methodologies and econometric models have been used to establish the nature of the nexus between the variability of macroeconomic indicators and stock market performance. Thus, the current study investigates the effect of political risk on the stock market return and volatility.

1.1 Statement of the problem
The dynamic interactions among various macroeconomic variables and the stock market have consequential effects on both market capitalization and companies' valuations, which makes investors skeptical about the future performance of companies and the stock market itself. As a result, the stock prices may drop in the short run as well as the long run. Therefore Investors in the Nigerian Stock Exchange need information on the influence of macroeconomic variables

foreign exchange, interest rates and inflation rate on the stock market prices for companies quoted at Nigeria Stock Exchange.

In view of this, there are several related studies that addressed the causal relationships between stock market performance and various macroeconomic variables these include Naik (2013) who investigated the relationships between the Indian stock market index and industrial production index, wholesale price index, money supply, treasury bills rates and exchange rates. Osamuonyi and Evbayiro-Osagie (2012) investigated the relationship between macroeconomic variables and the Nigerian capital market index among others. There is no general consensus as regard to their findings and conclusions and these might be due to different methodologies applied, different set of variables used for the study and different time periods considered for the study among others. Hence, the relationship between fundamental macroeconomic variables and stock market movements needs fresh enquiry and it is on this note that the researcher considers this area of interest and hopes to look at effect of political risk on stock market return and volatility in Nigeria.

1.2. Objectives of the Study
The main objective of this study is to examine the effect of political risk on stock market return and volatility in Nigeria. The specific objectives are to:
i) assess the effect of political risk on stock market return in the Nigeria.
ii) examine the effect political risk on stock market volatility in the Nigeria.

1.3 Hypotheses
$H0_1$: Political risk has no significant effect on stock market return in Nigeria.
$H0_2$: Political risk has no significant effect on stock market volatility in Nigeria

2. Empirical Review and Theory
Stock Return is the gain or loss of a security in a particular period. The return consists of the income and the capital gains relative on an investment, and it is usually quoted as a percentage. Stock Return is the return that the investors generate out of the stock market. This return could be in the form of profit through trading or in the form of dividends given by the company to its shareholders from time-to-time. Stock return is the changes in stock prices relative to the initial prices at the point of investor's decision to purchase the stock (Rutto, 2014). Jordan and Fischer (2002) define return as the motivating force and the principal reward in the investment process and it is the key method available to investors in comparing alternative investments. They document that the return has two components. The basic component is the periodic cash receipts (or income) on investments, either in the form of interest or dividends. The second component is the change in the price of the asset is commonly called capital gain or loss.

Stock returns vary in different periods and this is known as stock return volatility, which is the amount of uncertainty or risk about the size of changes in a security's value. The most common form of generating stock return is through trading in the secondary market. Theoretical and empirical works have established that financial time series such as stock market data are found to exhibit some common characteristics, often referred to as stylized facts. These stylized facts include fat tails, volatility clustering, leverage effects, long memory and co-movement in volatility. Fat tails, also called heavy tails, implies leptokurtic distributions which captures the

density of the distribution towards the tail areas. High frequency financial time series tends to have a fourth moment (kurtosis), which is higher than the normal value of 3 and makes the normality assumption inappropriate for such series. Volatility is the relative rate at which the price of a security moves up and down within a very short period of time (Taylor, 2007). Volatility clustering is an indication of persistence in past shock. It implies that a prolonged period of low volatility is followed by prolonged periods of high volatility. According to Black (1976), leverage effect implies that price movements are negatively correlated with volatility. Long memory is also an indication of persistent volatility and evidence of near unit root behaviour of the conditional variance process. Lastly, co-movement in volatility arises when looking at two or more different markets. It suggests that big movements in one financial time series are matched by other big movements from a different market.

Volatility adversely affects the functioning of the financial system and hence economic performance. Higher returns encourage the investors to invest and increase the capital inflow, whereas in volatile environments the returns are not certain and hard to predict affecting investments eventually. Risk is the major factor that determines the returns. The higher the risk, the higher will be the return. Accurately modelling and forecasting volatility is important since volatility is an important variable in many areas of finance, like risk management, among others.

Caner and under (2005), outlined the factors that explain the sources of volatility in stock return. dividend yield, exchange rate, interest rate, inflation rate and the movement of the world market index have been identified as the more significant variables that affect market volatility. The study included data from 1990 to 2000 from the following 19 stock markets: US and Japan as developed stock markets, Hong Kong and Singapore as developed emerging stock markets and Argentina, Brazil, Chile, Mexico, the Czech Republic, Hungary, Poland, Russia, Turkey, Indonesia, Korea, Malaysia, the Philippines, Taiwan and Thailand as emerging stock markets. The results indicate that dividend yield is a significant source of stock return volatility with the highest volatility in all markets: the developed, the developed emerging and the emerging stock markets. From these findings, these factors (Dividend yield, exchange rate, interest rate, inflation rate and the movement of the world market index) might also be the sources of volatility since the Nigerian stock market because is also an emerging market.

The theory of asset pricing, in general, demonstrates how assets are priced given the associated risks. The Arbitrage Price Theory (APT) suggested by Ross (1976) has shown that there is an approximate relationship between the expected returns and the estimated explanatory variable. This was shown in the model below:

$R_i = \lambda_0 + \lambda_1 \beta_{1i} + \lambda_2 \beta_{2i} + \cdots + \lambda_n \beta_{nk} + \mu_i$ …………………………........................... (2.2)

Where R_i is the mean excess return for asset i and the $\beta's$ represents the sensitivity of a security's return n to the risk factor k. The λ_n's represent the reward for bearing risk associated with the economic factor fluctuations. Equation (2.2) simply says that the expected return of an asset is a function of many factors and the sensitivity of the stock to these factors. Interestingly, APT does not specify the type or the number of macroeconomic factors for researchers to include in their study. According to APT, any new information about the fundamental macroeconomic factors such as real output, inflation, exchange rate, interest rate, foreign investment and so on may influence the stock price/returns through the impact of expected dividends, the discount rate or both (Naik & Padhi, 2012). Interestingly, APT does not specify the type or the number of

macroeconomic factors for researchers to include in their study. For example, although Ross (1986) examined the effect of four factors including inflation, gross national product (GNP), investor confidence, and the shifts in the yield curve, they suggested that the APT should not be limited to these factors. Therefore, there is a large body of empirical studies that have included a large number of different macroeconomic factors, depending on the stock market they studied. In this study, only political risk will be included to examine its effect on the Stock market return and volatility in Nigeria and APT underpins the study.

In a study conducted by Ahmad and Ghazi (2014) on long-run and short-run relationship between stock market index and main macroeconomic variables performance in Jordan. The selected macroeconomic variables are Real Gross Demotic Product, Consumer Price Index, Credit to Privet Sector, Weighted Average Interest Rate on Time Deposit, and dummy variable explain the global financial crises period. The data used in the study are quarterly data from 1992:Q1- 20014:Q1. Johansen co-integration test and Vector Error Correction model (VECM), Impulse Response Function (IRF) and Variance Decomposition (VD) are employed. The empirical results indicated that there is a long run equilibrium relationship among stock market index and the main macroeconomic variables in Jordan. The findings of the study have showed that the speed of adjustment in the VECM is significant and relatively slow. The study found that an increase in the weighted average interest rate on time deposits in the banking system has a greater effect on the stock price index than other macroeconomic and financial variables. However, the study classified (Real Gross Domestic Product (GDP), Consumer Price Index (CPI), Credit Facilities Extended by Licensed Banks to Private Sector (Resident), and Weighted Average Interest Rate on Time Deposits (DR) as the main macroeconomic variables without any justification.

Kitati, Zablon, and Maithya (2015) investigated Stock prices fluctuations for quoted companies occur daily due to both company specific variables like company earnings with corresponding dividend policies, and multiple macro-economic variables. This study sought evidence supporting the existence of influence of the selected macro-economic variables of foreign exchange rate of hard currencies, interest rate and inflation rate on share prices fluctuations based on the weighted average monthly data from January 2008 to December 2012 for the companies listed on the Nairobi Securities Exchange in Kenya. The influence of selected macro-economic variables on stock exchange provide important implications for monetary policy, risk management practices, financial securities valuation and government policy towards financial markets. The study utilized secondary data that was obtained from Central Bank of Kenya, Institute of statistical Kenya and Nairobi Securities Exchange. To investigate the effect of the selected macro-economic variables on share prices of the companies listed on the Nairobi Securities Exchange, simple and multi-variate regressions analysis was used. For all of the quoted companies it was desirable to find if the stock prices fluctuations are predominantly due to the selected macro-economic variables.

Najaf, and Najaf (2016) analysed the relationship between Indian Rupess-US dollar exchange rate and Nifty returns. The study gathers data from period of October 2008, to march, 2010. Unit root tests have proved that Nifty returns and exchange rate are stationary and they are stationary at level form. There is negative relationship between exchange rate and Nifty returns exchange rate. For testing the causal relationship between these variables we have used Granger causality

test. The study showed that there is unidirectional relationship between exchange rate and Nifty returns. The study has provided such type of information, which would favourable for the gaudiness of management decision about the risk and investment. This information will beneficial for government policies. The maintained of foreign exchange would motive the foreign investors.

It is evident that from all the studies reviewed, that very few of the studies examine the effect of political risk on stock market return and volatility and this create a gap in the literature which this study intends to fill.

3. Methodology

Causal research design is employed in the study and time series data were collected over a successive point for thirty four years which spans from 1985 to 2018 from Central Bank of Nigeria Statistical Bulletin, Securities and Exchange Commission and World Bank Data Indicator.

The annual All Share Index of Nigerian Stock Exchange (NSE) is employed in this study and data on annual market share index will be sourced from NSE. The annual All Share Index will be used to compute stock market return and volatility using continuous compounding formula. The formula thus adopted is displayed below:

$$R_t = [\log(P_t) - \log(P_{t-1})]..3.1$$

Where R_t is the return in period t, P_t and P_{t-1} are the all share index on the (t) year, and (t-1) year. This method of computing return has been used by many researchers as Kiymaz and Umar (2013), Oyedeko and Zubairu (2017) among others. The use of this methodology, however, has two drawbacks. First, errors in the model may be autocorrelated resulting in misleading inferences. The second drawback is that error variances may not be constant over time. To address the autocorrelation problem, we include lagged values of the return variable in the equation. In such, returns have the following stochastic process. To address the second drawback, we allow variances of errors to be time dependent to include a conditional heteroscedasticity that captures time variation of variance in stock return. Thus, error terms now have a mean of zero and a time changing variance of $h_t[e_t (0, h_t)]$.

There are different types of modelling for conditional variances suggested in the literature. The autoregressive conditional heteroscedastic (ARCH) model was developed by Engle (1982), suggest that the conditional variance h_t depends upon the past squared lagged values of the error terms from the return. This is known as the autoregressive conditional heteroscedastic model (q) (ARCH (q)). The generalized version of ARCH (q) is suggested by Bollerslev (1986) and makes the conditional variance a function of lagged values of both h_t as well as ε_t^2. Hence the study adopts the GARCH model to capture the condition variance of the mean return. The specification of GARCH (p,q) model is expressed below.

$$h_t = a_0 + \sum_{i=1}^{n} a_{1j} h_{t-j} + \sum_{i=1}^{n} a_{2i} \varepsilon_{t-i}^2 ....3.2$$

The model specified for the study are both in mean and variance equation based on the three hypotheses formulated in the previous chapter.

$$R_t = \theta_1 \Pr + \sum_{i=1}^{n} \alpha_i R_{t-1} + \varepsilon_t ....3.3$$

Where: R_t is the log return of the market index at year t, $\Pr$ represent the political risk, θ_1 represent the co-efficient of the political risk which measure the sign and size of the political risk. R_{t-1} is the lag value of the endogenous variable which capture the dynamic process, it eliminate the possibility of having auto correlated errors, α_i account for autoregressive component of the return, n is the number of lag order. This captures the first hypothesis i.e. effect of political risk on stock market return in Nigeria.

$$h_t = a_0 + a_1 h_{t-1} + a_2 \varepsilon_{t-1}^2 + \alpha_1 \Pr ....3.4 \, \alpha_1 \text{re}$$

presents the coefficient of the political risk which measures the sign and size of the political risk on stock market volatility, Pr represents political risk. This captures the second hypothesis i.e. effect of political risk on stock market return volatility in Nigeria.

The diagnostic tests are necessary to ensure that the result of the estimate are unbiased, correct and with minimal error. It also suggests the appropriateness of applying the GARCH-family models in the estimation. The diagnostic tests that were employed for this study are: Descriptive and Normality test, ARCH LM test, Autocorrelation test, Heteroscedastic test and Unit root test.

4. Results and Discussion

The data estimated in this study are time series proxied by annual market capitalization Index for the period of 1985 to 2018. The data were used to compute the stock market return and volatility in the study and the political risk were measured through an index provided in the World Bank data indicator. The computed stock market return and volatility are analysed through GARCH model and the outputs are presented in concise tables in the subsequent section below.

Table 4.1: Selected Variables for the Study.

Year	MC	RET	Volatility	PRISK
1985	6.6	0	0	0
1986	6.8	0.012965	0.02593	0
1987	8.2	0.081305	0.16261	0
1988	10.0	0.086186	0.172372	0
1989	12.8	0.10721	0.21442	0
1990	16.3	0.104978	0.209955	0
1991	23.1	0.151424	0.302849	0
1992	31.2	0.130543	0.261085	0
1993	47.5	0.182539	0.365078	0
1994	66.3	0.14482	0.28964	0
1995	180.4	0.434723	0.869446	0
1996	285.8	0.199826	0.399651	-1.06
1997	281.9	-0.00597	-0.01193	-0.59

1998	**262.6**	-0.0308	-0.0616	-1.46
1999	**300.0**	0.057827	0.115653	-1.63
2000	**472.3**	0.197097	0.394193	-1.63
2001	**662.5**	0.146968	0.293936	-1.75
2002	**764.9**	0.062419	0.124838	-1.67
2003	**1,359.3**	0.249711	0.499421	-2.03
2004	**2,112.5**	0.191481	0.382963	-2.01
2005	**2,898.8**	0.137422	0.274843	-1.86
2006	**5,133.6**	0.248204	0.496408	-2.00
2007	**13,173.9**	0.409292	0.818585	-2.21
2008	**9,532.8**	-0.14049	-0.28099	-1.96
2009	**7,027.7**	-0.13241	-0.26481	-2.04
2010	**9,909.4**	0.149234	0.298468	-2.09
2011	**10,275.4**	0.015751	0.031503	-2.13
2012	**14,800.9**	0.158491	0.316981	-1.93
2013	**19,077.4**	0.11023	0.22046	-1.88
2014	**16,875.1**	-0.05327	-0.10655	-1.94
2015	**17,003.4**	0.003289	0.006578	0.00
2016	**16,185.7**	-0.0214	-0.04281	0.00
2017	**22,917.9**	0.151043	0.302085	0.00
2018	21,904.04	-0.01965	-0.0393	0

Source: 1.Central Bank of Nigeria Statistical Bulletin.
2. Securities and exchange commission.
3. World Bank Data Indicator

Notes: MC = Market Capitalisation.
RET = Stock Market Return.
Volatility = Stock market Volatility
Prisk = Political Risk.

4.1   Descriptive Statistics

It is imperative to analyse the statistical characteristics because this guide and give a clue on how the stock market return behave. Descriptive statistics used are the mean, median, maximum, minimum and standard deviation. The table 4.2 below detailed the descriptive statistics on the variables of interest.

Table 4.2: Descriptive Statistics

	PRISK	RET	MC	VOLATILITY
Mean	-1.167385	0.117507	3986.533	0.235014
Median	-1.633998	0.130543	472.3000	0.261085
Maximum	0.000000	0.434723	19077.42	0.869446
Minimum	-2.211123	-0.140494	6.800000	-0.280988
Std. Dev.	0.918955	0.130257	5877.239	0.260513
Skewness	0.382796	0.290729	1.310013	0.290729
Kurtosis	1.318670	3.631488	3.339285	3.631488
Jarque-Bera	4.124041	0.890385	8.433740	0.890385
Probability	0.127197	0.640701	0.014745	0.640701
Sum	-33.85418	3.407702	115609.5	6.815405
Sum Sq. Dev.	23.64541	0.475069	9.67E+08	1.900277

Source: Output from the E-view (2019)

In an attempt to examine the effect of political risk on stock market return and volatility in Nigeria, this section begins by examining the descriptive statistics of the data series employed in the study. This includes data on political risk, stock market returns, market capitalisation and stock market volatility.

Table 4.2 shows the standard deviation for each of these variables. The standard deviation for political risk stood at 0.918 while the standard deviation for stock market returns, stock market volatility and market capitalisation stood at 0.130, 0.260 and 5877 respectively. The table revealed that standard deviation of the stock market return is the least for the selected variables used in the study. Also, the mean values of the variables are also reported in the table. For instance, political risks associated with the stock market in Nigeria averaged -1.167 and varied from zero to -1.167. In addition, stock market returns averaged 0.117 and ranged from -0.140 to 0.434. The mean value for market capitalisation and stock market volatility are 3986.5 and 0.235 respectively. The Jarque-Bera (JB) statistics however indicates that most of the data series are not normally distributed. This is indicated by the probability value of Jarque Bera statistics which for most series are not significantly different from zero at 5% significant level except for market capitalisation.

The skewness and kurtosis in the analysis provides explanation about the deviation from normal distribution and flatter shape or peakness of the distribution. The result shows that Political Risk (0.382), stock market returns (0.290) and stock market volatility (0.290) are marginally greater than zero. The result simply means that the values of the three variables skewed to the left of the mean while the other variable values (market capitalization) have a normal distribution. The kurtosis results revealed that stock market returns, market capitalisation and stock market volatility has leptokurtic distribution which is sharper than a normal distribution with value concentrated around the mean and thicker tails with high means probability for extreme values kurtosis > 3, while PRISK have platykurtic distribution, flatter than a normal distribution with a

wider peak. The probability for extreme values is lesser than a normal distribution and the values are spread around the mean.

4.2. Tests for Stationarity of the Model

In order to test for the stationarity of the time series data used in this study, the Augmented Dickey-Fuller (ADF) Unit Root Test is used because of its superiority over the Dickey-Fuller (DF). The ADF test decision rule is that the ADF test statistic must be largely negative, that is, it must be greater than or equal to any of its critical values in absolute term before one can accept stationarity. In this study, 5% critical value is used. The result of the unit root test is presented in Table 4.3 below:

Table 4.3: Test for Unit Root

Variables	ADF Statistic at level	ADF Statistic at First Difference	5% Critical Value	Level	Remarks
MC	0.325	-6.190	-2.957	I(1)	Stationary
VOLATILITY	-4.468		-2.954	I(0)	Stationary
RET	-4.454		-2.957	I(0)	Stationary
PRISK	-0.925	-8.007	-2.957	I(1)	Stationary

Source: Output from the E-view (2019).

The result in Table 4.3 indicates that only two variables are stationary at level. This can be seen by comparing the test statistics (in absolute terms) of ADF statistic with the critical values (also in absolute terms) at the 5% level of significance. The result shows that stock market volatility and stock market returns are stationary at level. However, political risk and market capitalisation are stationary at first difference. This implies that there is a short run relationship among the variables selected for the study.

4.3 The Estimation of GARCH Model

The Generalised Auto Regressive Conditional Heteroscedastic (GARCH) model was employed to assess the effect of political risk on stock market return in the Nigeria.

Table 4.4 GARCH Result: Estimation of Stock Market Returns

$$\sigma_t^2 = 0.012 + 0.305\,\varepsilon_{t-1}^2 - 0.057\sigma_{t-1}^2$$

Dependent Variable: RET
Convergence achieved after 23 iterations
Coefficient covariance computed using outer product of gradients
Presample variance: backcast (parameter = 0.7)
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1)

Variable	Coefficient	Std. Error	Z-Statistics	P. value
C	0.131672	0.053602	2.456495	0.0140
PRISK	0.010234	0.032537	0.314526	0.7531

Variance Equation				
C	0.012453	0.018358	0.678332	0.4976
RESID(-1)^2	0.305345	0.408354	0.747745	0.4546
GARCH(-1)	-0.057225	1.360569	-0.042060	0.9665
R-squared	0.706555	**Mean dependent var**	0.117507	
Adjusted R-squared	0.630238	**S.D. dependent var**	0.130257	
S.E. of regression	0.132211	**Akaike info criterion**	-1.011258	
Sum squared resid	0.471955	**Schwarz criterion**	-0.775517	
Log likelihood	19.66324	**Hannan-Quinn criter.**	-0.937427	
Durbin-Watson stat	1.613377			

Source: Output from the E-view (2019).

Table 4.4 reported the Generalised Auto Regressive Conditional Heteroscedastic (GARCH) model to capture the first objective. The results demonstrate that political risk has a positive relationship with stock market returns, which is in line with the findings of Nicholas and Malefa (2018), but not statistically significant. Surprisingly, result showed that in spite of the political risk in the country, the stock market return still increased by 1 percent. This is because the successive military regimes in Nigeria have not been able to instil confidence in the stock market during their period of governance. Thus, there is always a renewed hope and expectations that the stock market will be favourable anytime the country is to experience change in government. The empirical estimations for serial autocorrelation and heteroskedasticity are also reported. The results show that the model passed the diagnostic tests. The dynamic model diagnostic test shows that the incidence of political risk account for about 70% of the variation in stock market return in Nigeria. Thus, the overall goodness of the model is satisfied. The Durbin-Watson statistics is approximately 2 and this shows that there is no serial autocorrelation problem in the model.

The result of the variance equation indicates that the ARCH term has a positive impact on Nigeria stock market returns but not statistically significant at 5%, thus implying the absence of volatility clustering in the variables investigated. The GARCH term is also not statistically significant and this indicates that there is no presence of a long term persistence volatility in the model. The sum of the ARCH and GARCH term did not tend to unity and this confirms that the volatility of political risk is very low in relation to stock market returns. The variance equation of the GARCH model shows that previous shocks marginally affect conditional volatility of other periods.

Table 4.5 GARCH Result: Estimation of Stock Market Volatility

$$\sigma_t^2 = 0.05 + 0.305\, \varepsilon_{t-1}^2 - 0.06\sigma_{t-1}^2$$

Dependent Variable: Volatility
Convergence achieved after 24 iterations
Coefficient covariance computed using outer product of gradients
Presample variance: backcast (parameter = 0.7)
GARCH = C(3) + C(4)*RESID(-1)^2 + C(5)*GARCH(-1)

Variable	Coefficient	Std. Error	Z-Statistics	P. value
C	0.242039	0.100840	2.400233	0.0164
PRISK	0.009169	0.062942	0.145667	0.8842
Variance Equation				
C	0.050491	0.079407	0.635850	0.5249
RESID(-1)^2	0.305664	0.407270	0.750520	0.4529
GARCH(-1)	-0.066918	1.498766	-0.044649	0.9644
R-squared	0.671382	**Mean dependent var**		0.227180
Adjusted R-squared	0.656172	**S.D. dependent var**		0.259553
S.E. of regression	0.263965	**Akaike info criterion**		0.366110
Sum squared resid	1.950966	**Schwarz criterion**		0.599643
Log likelihood	-0.491649	**Hannan-Quinn criter.**		0.440819
Durbin-Watson stat	2.155915			

Source: Output from the E-view (2019).

Table 4.5 is the Generalised Auto Regressive Conditional Heteroscedastic (GARCH) model to capture the effect of political risk on stock market volatility. The results demonstrate that political risk has a positive relationship with stock market volatility. Again, this variable is not statistically significant in the study period. It was found that a ten percent increase in the level of political risk in the country increased stock market volatility by just 0.9 percent. The empirical estimations for serial autocorrelation and heteroscedasticity are also reported. The results show that the model passed the diagnostic tests. The dynamic model diagnostic test shows that the incidence of political risk accounts for about 67% of the variation in stock market volatility in Nigeria. Thus, the overall goodness of the model is satisfied. The Durbin-Watson statistics of 2.15 shows that there is no serial autocorrelation problem in the model.

The result of the variance equation indicates that the ARCH term has a positive impact on Nigeria stock market returns but not statistically significant at 5%, thus implying the absence of volatility clustering in the variables investigated. The GARCH term is also not statistically significant and this indicates that there is no presence of long term persistence volatility in the model. Like in the first model, the sum of the ARCH and GARCH term did not tend to unity which implies that the volatility of political risk is very low in relation to stock market volatility. The variance equation of the GARCH model shows that previous shocks marginally affect conditional volatility of other periods.

5. CONCLUSION AND RECOMMENDATIONS
The study concludes based on the findings that political risk has effect on stock market return and volatility but this effect is not significant. Based on this, the study partially conform with arbitrage theory which postulate that political risk is one of the fundamental macroeconomic view which constitute new information on the stock market return and volatility. Also, the study found that political risk has linear relationship with the stock market returns and volatility. This

implies that political risk affect stock market returns the same way as it affect stock market volatility. The study recommends that Government should formulate policies that will promote greater performance of stock market in terms of increase in stock return and decrease in stock market volatility; Nigeria Stock market authorities should ensure proper regulation and policies compliance such that new capital base for various functions prescribed by SEC as well as the minimum operating standard (MOS) requirements prescribed by the Nigerian Stock Exchange (NSE) are religiously followed in order to enhance performance of the market and lastly Investors should also take cognisance of the probable effect of political risk when investing in the stock market.

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