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Original Research Article

Exchange Rate and Stock Market Interactions in Nigeria: An ARDL Analysis

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Abstract: The study investigates the link between exchange rate and stock market performance in Nigeria. The main spur is to empirically determine if exchange rate proxies have the capacity to enhance stock market performance. The study utilized annual data from 1980-2020 and the variables are exchange rate, inflation rate and interest rate. The study employed Unit Root test for stationarity, Auto regressive distributed lags (ARDL) to Co-integration test and ECM test to determine the speed of adjustment from the short to its long run equilibrium and looked at the trends analysis of the data in the model. Furthermore, stability test was carried out to evaluate the variables. The result shows that variables are integrated of order 1(1) thereby establishing that the variables are co-integrated. The ECM (t-1) value of -19 per cent shows that it is rightly signed and is able to correct, adjust and tie the short run dynamics with the long run equilibrium. The study also discovers in addition some level of structural stability in the model using Cumulative Sum (CUSUM) test. The study concludes that exchange rate enhances stock market performance in the long run and recommends a strong manufacturing sector that produces for export so as to strengthen the Naira against any currencies of the world.

Keywords: Exchange rate, Interest rate, Inflation rate and ARDL.

BACKGROUND TO THE STUDY

Exchange rate firmness and stock market development are the mirror image that every economic intention needs to achieve in countries of the world, Nigeria inclusive. Due to the fact that the financial position of countries can be evaluated from its exchange rate (ECXR) stability, it therefore became imperative to have a very strong ECXR as signal for a strong and sustainable economy. Whereas a feeble currency is a mirror image of a very susceptible and frail economy. ECXR unpredictability has actual economic shocks because it undesirably upsets prices level, firms' profits and the whole activity in an economy (Abdullahi and *Oloyin-Abdulhakeem*, 2019). Correspondingly, stock market shows essential role in economic expansion of every nation. Stock market functions as a transmission mechanism upon which savings are mobilized and sufficiently distributed across the economic sectors with the understanding to get inclusive growth (Ouattara, 2017; Bala and Hassan, 2018). In addition to the foregoing stock market carry out the following functions such as boosting investors' confidence in both financial institutions and even the whole economy, shows strength and possibility of the productive sectors and accelerates capital allocation, investment and provides firms with easiness to way to have access to sufficient and required capital. Considering the challenge of global financial crisis, governments in the richest nations had to come up with liberation mechanism to bail out their financial systems. This determination led to the unanticipated performance of the Nigerian stock market in 2009 with a record of about N12.5 trillion market capitalizations from N9.7 trillion recorded in 2008 (Ejem, Ogbonna and Ezirim, 2018; Ahmad, Mishra and Daly, 2018). Nevertheless, in 2010, the market experienced a severe fall in portfolio investment inflow, occasioning in a fall in its contribution to GDP from 87.1% to 65.5%, which amounted to about $3.9 billion. On the contrary, in 2011, foreign direct investment inflow as a share of GDP, that got to its top in 2009 with a record of 89.9% significantly fell to 19.7% due to the declining confidence, is caused by Euro instability and variation (Alireza, Mohamed and Ishaq, 2019). As a consequence, many investible ideas of portfolio managers to buy and sell securities in the market were flung to an abyss. This triggered an increased return of foreign portfolio investments in both the capital and money markets due to the sense of uncertainty and anxiety of losing their investible fund (Emeni, 2015). Exchange rate and stock market price

are interrelated directly or indirectly, because today, the world is turning into a global village due to trade liberalization and globalization. For example, foreign investors are busy investing their capital in the stock markets in the globe. In this development, international investment is thriving speedily and capital is moving across all over the globe. The benefits of these investors are being determined by foreign exchange rate. Additionally, uncertainty in the exchange rate may bring about vagueness or otherwise in these investors. Consequently, ECXR is the fundamental determinant of stock market variations (Ahmad, Mishra and Daly, 2018). In Nigeria, the value of naira witnessed high point of unpredictability in recent times. For instance, statistical accounts have revealed that from 2006 to 2008 the value of naira to US$ was ₦125, but additionally devalued from ₦150.3 in 2010 to average of ₦153.90, ₦156.81 and ₦305.25 per US$ dollar in 2011, 2013 and 2017, correspondingly (Ejem, Ogbonna and Ezirim, 2018; Ozen and Tetik, 2019). This study conversely, try to contribute to discussions on the exchange rate-stock market links which empirically encloses the missing link that need to be tie together.

THEORETICAL FOUNDATION

Flow Oriented Model

This model is developed on the premise that a causal association flows from the exchange rate to the prices of stock in the stock market. In other words, exchange rate movements affect the stock prices. ECXR changes affect the competitiveness of firms over their effect on input and output prices. When the exchange rate rises, exporters will be negatively affected. This is because currency appreciation gives rise to higher or more increased price of exports in the international market. Furthermore, demand for exports will decline, as they will be seen as expensive by buyers on the international market; resulting into a competitive loss for exporting nations internationally. Consequently, returns on export are expected to shrink, and when these occur, exporting firms will also lose their competitiveness on the domestic stock market. Their attractiveness on the domestic stock market is also expected to decline, leading to decreasing value in their stock prices. The empirical outcome is an inverse association between the domestic currency and stock prices (Eseosa, Barnabas, Alex and David, 2020).

Stock Oriented Model

Emeni, (2015) opines that there is understandable problem with the flow oriented model as being that they have nothing to say about international capital movements, though it is acknowledged that international capital movements are very huge and govern the foreign currency market. Stock-oriented models put much stress on the part played by financial or capital account in the exchange rates determination. Ozen and Tetik (2019**)** believed that in the stock oriented model, the ECXR links demand and supply for assets (bonds and stocks). Consequently, prospects of exchange rate unpredictability can pointedly affect price fluctuation of financially held assets. In other words, currency variations may influence stock price movements.

Arbitrage pricing theory (apt)

Emeni (2015) argue that risk factors (in the APT) rise from vagaries in some essential economic and financial variables such as interest rates, inflation, real business activity, exchange rate among other variables. Additionally, Seyingbo, Fapetu and Adeyeye (2017**)** succumb that in line with the Arbitrage theory, an increase in real interest rate decreases the present value of a firm's future cash movements and making stock prices to drop. Nonetheless at the same time, a complex interest rate encourages the capital inflow, and hence exchange rate fall so, the disturbance from the real interest rate may be a function of a positive link between the mean level of stock prices and exchange rates. The APT model accordingly, assumes that exchange rate can be impactful on the stock market (Alireza, Mohamed and Ishaq, 2019).

Empirical Literature Reviewed

Akinmade, Adedoyin & Bekun (2020) study is the first attempt to empirically analyze stock market manipulation on the Nigerian Stock Exchange and its consequences on economic performance. The empirical investigation employs a broad data set of 186 actual manipulation cases indicted by the Nigerian Security and Exchange Commission between 2002 and 2016. We embrace market microstructure analysis and the event study method to understand how various manipulation techniques impact on market measures, and the Error Correction Model to evaluate their economic effects. Manipulation is found to distort market efficiency measures (such as market capitalization, value traded ratio and All-Share Index) and genuine traders are forced to exit the market to avoid possible trading with a manipulator. Such huge divestment and the subsequent financial risk weaken the ability of the stock exchange market to improve economic performance, creating negative consequences at the post-manipulation period. Essentially, economic variables (such as the GDP) react negatively to manipulative trading. This finding is insightful and a prompt to the Securities and Exchange Commission to design policy responses towards deterring and prosecuting unfair trading practices or other activities that contravene the market rules. Fatbardha, Eglantina, U˘gur Mirela and Marian (2020) examine the effect of real effective exchange rate volatility on economic growth in the Central and Eastern European countries. Additionally, the effect, through three channels of influence on economic growth which vary on the

measurement of exchange rate volatility, is examined. The study uses annual data for fourteen CE countries for the period 2002–2018 to examine the nature and extends the impact of such movements on growth. The empirical findings using the fixed effects estimation for panel data reveal that the volatility of the exchange rate has a significant negative effect on real economic growth. The results appear robust with alternative measures of exchange rate volatility such as standard deviation and z-score. This paper suggests that policymakers should adopt different policies to keep the exchange rate stable in order to foster economic growth Abdullahi and *Oloyin-Abdulhakeem* (2019) *study seeks to investigate the effects of foreign exchange rates dynamics on the Nigerian capital market performance. Secondary data sourced from the Nigerian stock exchange and the Central Bank of Nigeria Annual reports spanning from 1986 to 2015. The data obtained were subjected to both normality and co-integration tests. The study employed Vector Error Correction Model to investigate the impact of foreign exchange on the Nigerian capital market performance using market capitalization as the dependent variable and the official foreign exchange rate as the independent variable. Other control variables such as interest rate, inflation rate and the gross domestic product were introduced to have holistic assessment of the market performance. The result reveals that foreign exchange, interest rate, inflation rate and GDP have negative significant impact on the Nigerian capital market at 5% and 1% respectively. Thus, the study concluded that foreign exchange dynamics have significant negative effects on the Nigerian capital market performance. Based on the findings, the study recommends that the Nigerian capital market should be made viable and attractive to all investors particularly the local investors so as to instill confidence in the market by channeling long-term fund to improve viable sectors of the economy such as agriculture. Also, the CBN should put in place appropriate monetary policies that will stabilize the Naira so as to encourage foreign investors' patronage that will enhance the Nigerian market capitalization.* Ejem, Ogbonna and Ezirim (2018) study examined the nature of the relationship that exists between stock market return and conditional variance (volatility) in the Nigerian stock market, by applying Exponential Generalized Autoregressive Conditional Heteroscedasticity (EGARCH-in-Mean) model to Nigerian stock exchange (NSE) daily stock return series from January 4, 1999 to December 31, 2016. This is borne out of the mixed feelings of Nigerian investors who are risk-averse. The estimates from EGARCH model revealed that there is a positive and significant relationship between stock market returns and conditional volatility. The estimates also supported the existence of asymmetric effect. Although the Nigerian stock market is highly volatile, that volatility is not persistent. Therefore, the authors recommended, among others, that the Nigerian stock market should ensure timely disclosure and appropriate dissemination of company related information to the public or investors in order to avert escalation of bad news, which increases volatility. Ikumariegbe and Ejem (2018), examined exchange rate volatility stock persistence comparing Nigeria, Ghana, South Africa and the study employed GARCH and TGARCH to evaluate daily exchange rate of USA Dollar for Nigeria, Ghana and South Africa. The results show evidence of volatility clustering in the three markets and also evidence that volatility is persistent in the three markets. The results also found evidence of asymmetric effect in the Nigeria, Ghana and South Africa. Polanco-Martinez, Fernandez-Macho, Numann and Faria (2018) investigated the integration between five European equity markets (Italy, Spain, Ireland, Greece, and Portugal) among themselves and with the Standard and Poor's (S&P) 350 index for Europe in the crisis period and the period preceding the crisis using the wavelet analytical technique and nonlinear Granger causality from 2004 to 2011. The results indicate higher levels of correlation in the crisis period than in the period before the crisis. Also, the Italian, Portuguese and Spanish markets showed higher levels of integration than the other markets and the S&P 350 index. Finally, the nonlinear causality test showed that there were more unidirectional and bi-directional causalities in the crisis period than in the preceding period.

Ahmad, Mishra and Daly (2018) examined interactions of the bond markets of the BRICS (Brazil, Russia, India, China, and South Africa) with three major global bond markets (US, EU and Japan) using VAR and variance decomposition from 1997 to 2016. Weekly data was employed for the study and findings revealed that Russia and South Africa are net transmitters of volatility to other BRICS markets, while India and China showed a low level of connectivity with the others. Furthermore, the Chinese bond markets showed more connectivity with the US bond market while shocks from the US were observed to be influential on the BRICS. The result indicated that there was increased correlation between the DJIA and virtually all the markets in the study during the crisis period, but the relationship waned generally after the crisis especially with the developing markets. Manasseh, Ogbuabor, Anumudu, Abada, Okolie and Okoro (2018) studied the causal association between stock market development, financial sector restructuring and economic growth in Nigeria, using Vector autoregressive and error correction model for the analysis. We saw bidirectional causality amid stock market development and economic growth, along with financial sector reform and economic growth. This indicates that stock market expansion and economic growth and financial sector development and economic growth stimulate each other. Further, the findings disclose a uni-directional causality running from financial sector reform to stock market development. Hence, there is a confirmation of positive long-run link between the variables of co-integrating equations. Additionally, more investigations on the affiliation between business environment, legal framework and stock market development, display a positive long run affiliation between the variables of the co-integrating vectors, suggestive of good business environment and quality legal framework could be a necessity for stock market development through confidence building and investors protection. Bala and Hassan (2018) studied the link between exchange rates and stock market in Nigeria using from 1985 to 2015. This study employed Autoregressive Distributed Lag (ARDL) model and Granger Causality tests. Exchange rate, economic growth, money supply and stock

market (i.e., all share indexes) were captured in the model. The results display that exchange rate and economic growth have positive and statistically significant effect on stock market in Nigeria, whereas money supply has negative and statistically significant effect on stock market over the study period. Granger causality results showed that there is unidirectional causality which runs from exchange rate to stock market. Correspondingly, there is unidirectional causality that runs from stock market to money supply. It is likewise identifying no evidence of causality runs from economic growth to stock market. This study recommends amongst others that there is the necessity for policymakers to guarantee effective implementation of present monetary policy instruments and device resilient way of harmonizing monetary and fiscal policies in order to continue stable exchange rate and shun structural break that affect the whole system including the stock market. There is similarly the need for Central Bank of Nigeria to lessen the volume of money in circulation, this will help to reduce the price of goods and services in the economy vis-à-vis boosting the savings and increase the levels of investment in the long run. Ouattara (2017) studied the integration of emerging stock markets of the BRICS countries using quarterly data from 2000-2015. The Johansen co-integration, VAR Granger causality/wald test, correlation, IRF and the VDA were employed to examine the long-run and short-run dynamics between the markets. The study discovered that though there were no long-run associations between the markets, there were unidirectional causalities between the market pairs, except between the Indian and Brazilian market. Furthermore, the Chinese stock market was found to be more independent than the other markets in the study. Seyingbo, Fapetu and Adeyeye, (2017) examined the effect of exchange rate on stock market performance by means of MCAP as pointers for stock market performance and exchange rate as the parameter for computing exchange rate volatility. Techniques used are Autoregressive Conditional Heteroscedasticity (ARCH), Generalised Autoregressive Conditional Heteroscedasticity (GARCH), Exponential Generalised Autoregressive Conditional Heteroscedasticity (E-GARCH) and Threshold Autoregressive Conditional Heteroscedasticity (TARCH). The results discovered that exchange rate has a positive link with market capitalization rate in Nigeria in all the examined in the study. Conversely, the study revealed that the instability of variance of the residual amongst the models diverges from each other. It was revealed that there is no ARCH effect in the ARCH model, while there is ARCH and GARCH influence in the GARCH model. The study recommended that government should impose policy to deter importation of non-essential, less-productive goods and services and similarly make the enabling and encouraging environment to boost production and exportation of goods and services. Abimbola and Olusegun (2017) appraised the link between ECXR volatility, stock market performance and total output in Nigeria. Using quarterly time series data alongside applying the ARCH and GARCH model, Bayesian VAR, VAR causality and Granger Causality model. The study found that ECXR and Stock price are Volatile in nature. Furthermore, the study observed that the dwindling nature of the exchange rate, grossly affect aggregate output. The study also revealed that there is a high degree of positive association between exchange rate, stock price movement and aggregate output. More so, Exchange rate volatility Granger causes stock price movement and aggregate Output and vice versa. The study further revealed a significant positive response of aggregate output to stock market performance and volatility in the exchange rate. The joint causality revealed that volatility of exchange rate have effect on stock price and on aggregate output in Nigeria. Thus, concluding that there is a clear causal link between exchange rate instability, stock market performance and aggregate output in Nigeria.

METHODOLOGY

In an effort to find the suitable impact that exchange rate exerts on the stock market performance sector, the study adopts the regression model. The study engaged time series data spanning from 1980 to 2019. The econometric techniques are the Augmented -Dickey-Fuller (ADF) and Phillip Perron (P-P) used to ascertain the stationary properties of the time series, co-integration tests for long run equilibrium, error correction mechanism and post-tests on the variables for 38 years

Model specification

The present study is modified and seeks to examine the effect exchange rate exerts on the stock market performance in Nigeria for the period 1980-2019. The model is specified in mathematical functional form as is seen below:

$$MCAP = f(\text{ECXR}, \text{INTR}, \text{INFR})$$

Explicitly the above equation can be stated in econometric form thus

$$MCAP = \lambda_0 + \lambda_1 ECXR_t + \lambda_2 INTR_t + \lambda_3 INFR_t + \mu_t \quad \textbf{(2)}$$

The log-linear form of the model is stated as follows

$$\ln MCAP = \lambda_0 + \lambda_1 \ln \sum_{t-1}^{n} EXCR_t + \lambda_2 \ln \sum_{t=1}^{n} INTR_t + \lambda_3 \ln \sum_{t-1}^{n} INFR_t + \mu_t \quad \textbf{(3)}$$

Where:
MCAP = Market capitalization
ECXR = Exchange rate
INTR= Interest rate
INFR=Inflation rate.

INTERPRETATION OF EMPIRICAL RESULTS

Table-1: UNIT ROOT TEST (PP)

ADF TEST: LEVEL				**ADF TEST: 1ST DFF**		
Variables	**Test Stat**	**5 %**	**Order**	**Test Stat**	**5 %**	**Order**
MCAP	-2.558474	-3.529758	**NS**	-7.600582	-3.533083	**1(1)**
ECXR	-2.442771	-3.529758	**NS**	-5.775871	-3.533083	**1(1)**
INFR	-1.788989	-3.529758	**NS**	-7.121911	-3.533083	**1(1)**
INTR	-3.511894	-3.548490	**NS**	-6.223913	-3.536601	**1(1)**
NS= Not stationary. N = Stationary. 5 %						

Source: Authors' computation (E.view 9.0)

From Table 1, the variables are found to be integrated of order (1) using the ADF test to determine the time properties of the model. All variables are stationary at first differences. From the above, no spurious problem associated with the time series data.

Table-2: Unit Root Test

PP TEST: LEVEL				**PP TEST: 1ST DFF**		
Variables	**Test Stat**	**5 %**	**Order**	**Test Stat**	**5 %**	**Order**
MCAP	-2.689819	-3.529758	**NS**	-7.553626	-3.533083	**1(1)**
ECXR	-2.487997	-3.529758	**NS**	-5.762781	-3.533083	**1(1)**
INFR	-1.857457	-3.529758	**NS**	-7.176746	-3.533083	**1(1)**
INTR	-3.201798	-3.529758	**NS**	-10.04991	-3.533083	**1(1)**
NS= Not stationary. N = Stationary. 5 %						

Source: Authors' computation (E.view 9.0)

From Table 2, the variables are found to be integrated of order (1) using the P-P test to determine the time properties of the model. All variables are stationary at first differences. From the above, no spurious problem associated with the time series data

Table-3: ARDL bound test to cointegration

Dependent Variable	**AIC Lags**	**F -statistics**	**F Prob.**	**Outcome**
BOP/EXR	(1, 0)	23.12564	0.000000	Co-integration
EXR/BOP	(1, 0)	23.12564	0.000000	Co-integration
ITR/BOP	(1, 0)	0.426400	0.076280	No Co-integration
MSP/BOP	(1, 0)	24.65297	0.000000	Co-integration
NET/BOP	(1, 0)	21.33421	0.000000	Co-integration
TOP/BOP	(1, 0)	0.542861	0.084628	No Co-integration
ARDL results shows 3 Co-integrrrating equation				
Lower Bounds = 4.13			Upper Bounds = 5.76	

Source: Authors' computation (E.view 9.0)

From Table 3, ARDL Co-integration test is used to identify the co-integrating relationship among the variables. The null hypothesis of no co-integration is rejected at 0.05 levels for 4 co-integrating equation. The ARDL test indicate that there is 4 co-integrating equation between the variables at 5 per cent level of significance. Therefore, a long run equilibrium relationship is established between these variables and the hypothesized fundamentals for the period under consideration, 1980 - 2019.

Table-4: ECM Parsimonious Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.444312	2.453978	1.403563	0.1707
LOG(ECXR)	0.183119	0.585015	2.313016	0.0564
LOG(ECXR(-2))	0.715289	0.527584	1.355781	0.1853
LOG(INFR(-1))	-0.554600	0.793727	-0.698729	0.4901
LOG(INFR(-2))	-0.671651	0.852852	-2.787536	0.0471
LOG(INTR(-1))	0.394521	1.269886	0.310674	0.7582
LOG(INTR(-2))	0.286900	1.225662	2.234078	0.0165
ECM(-1)	0.000192	7.39E-05	2.602704	0.0142
Adj. R^2 = 0.703639 ; DW = c; F* = 13.54968				

Source: Authors' computation (E.view 9.0)

From table IV, the ECM(-1) is negatively signed and indicates that the speed of adjustment from the short run dynamics to its long run equilibrium is 0.000192 or 19 per cent and is internally consistent at 5 per cent too given the t* value of 2.602704. The adjusted R^2 is 0.759707 or 75 per cent. The F* value of 13.54968 shows the entire model is stable over time while the Durbin-Watson test statistic value of 2.602704 is close to 2 and reveal absence of positive first order serial correction in the model.

Post Estimation Test: The Test of Structural Stability of the Model

The stability test carried out shows that all the variables are stable since the CUSUM test are within 5 per cent critical bound for stability as can be seen in fig 1.

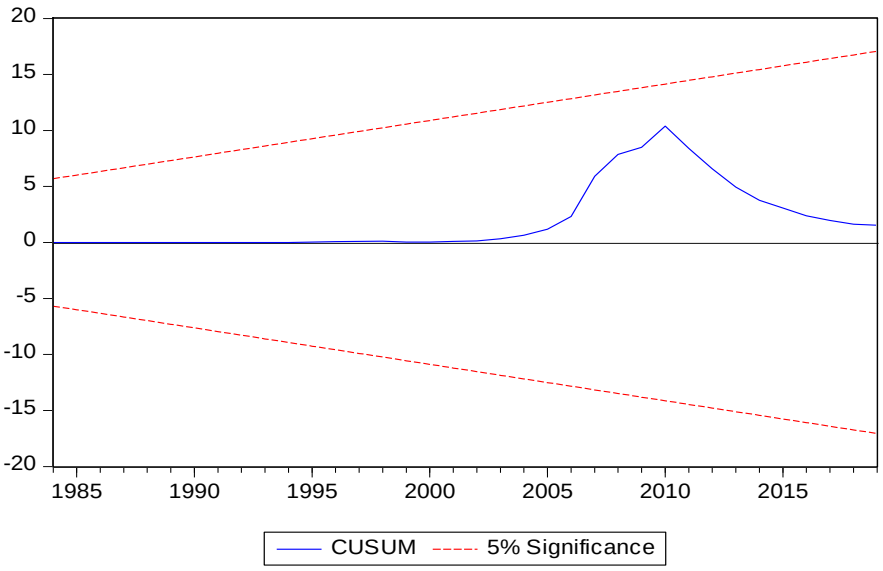

Fig-1: CUSUM test

CONCLUSION

The study investigates the link between exchange rate and stock market performance in Nigeria. The main spur is to empirically determine if exchange rate proxies have the capacity to enhance stock market performance. The study utilized annual data from 1980-2019. The study concludes that part of the reasons for the low performance of the stock market is the exchange rate instability in the market. The study concludes that Nigeria must diversify her economy to strength her Naira exchange against other international currencies. The study concludes that exchange rate enhances stock market performance in the long run given the empirical result.

RECOMMENDATIONS

The study strongly recommends a diversification of the economy so as to make the Naira strong. If the country embarks on the production of goods and services for export, the Naira will be strength hence its heavy dependence on oil would be reduced. Manufacturing firms should produce quality goods that will attract global patronage in order to have a stronger monetary and exchange rate control. This is because, the fluctuating nature of Nigerian exchange rate today has conformed to the impossible trinity which agree to monetary autonomy and capital market integration thus giving up exchange rate stability as against United-state dollar. Finally, the government should reduce the volume of money in

circulation in the economy to reduce prices price of goods and services in the economy vis-à-vis boosting the savings and increase the levels of investment in the long run.

REFERENCES

- Abdullahi, I.B., & Oloyin-Abdulhakeem, B.O. (2019). Foreign exchange rate dynamics and the Nigerian capital market performance. *Fountain University Osogbo Journal of Management, 4*(1), 46-56.
- Abimbola, B.A & Olusegun, A.J. (2017). Appraising the exchange rate volatility, stock market performance and aggregate output nexus in Nigeria. *Business and Economics Journal, 8*(1), 2-12.
- Ahmad W., Mishra A.V. & Daly K. J. (2018). Financial connectedness of BRICS and global sovereign bond markets. Emerging Market Review, *37*(c), 1–16.
- Akinmade, B & Adedoyin, F.F., & Bekun, F.V. (2020). The impact of stock market manipulation on Nigeria's economic performance. *Journal of Economic Structures, 9*(1), 1-28.
- Alireza Z., Mohamed A., & Ishaq, B.M. (2019). The impact of exchange rates on stock market returns: New evidence from seven free-floating currencies. *The European Journal of Finance, & Francis Journals, 25*(14), 1277-1288.
- Bala, S.A., & Hassan, A. (2018). Exchange Rate and Stock Market Interactions: Evidence from Nigeria. *Arabian Journal of Business and Management Review, 8*(1), 3-5.
- Ejem, C. A., Ogbonna, U. G., & Ezirim, B. C. (2018). The relationship between stock market return and conditional variance (volatility) in the Nigeria stock market. *International Journal of Business and Economic perspective, 13*(1): 89-105.
- Eseosa D.O., Barnabas, O.O., Alex, E.O. & David, T.E. (2020). Dynamic links between the Nigerian equity market and those of selected regional and developed countries. *Heliyon* 6(9), 047-82.
- Fapetu,O., Adeyeye,P.O., Seyingbo, S.D., & Owoeye, S.D. (2017). Exchange rate volatility and stock market performance in Nigeria. *Nigerian Journal of Management Sciences, 6*(1), 309-317.
- Fatbardha, M., Eglantina, H., U˘gur E., Mirela P., & Marian, C.V. (2020). The effect of exchange rate volatility on economic growth: case of the CEE countries. *Journal of Risk and Financial Management,*
- Kumariegbe, V. O., & Ejem, C. A. (2018). Exchange rate volatility shock persistence: A comparative analysis of Nigeria, South Africa and Ghana. *Uniport Journal of Business, Accounting and Finance Management, 8*(3), 205-2012
- Manasseh C. O., Ogbuabor, J. E., Anumudu, C.N., Abada, F.C., Okolie, M.A., & Okoro E. O. (2018). The causal effect of stock market development, financial sector reforms and economic growth: The application of vector autoregressive and error correction model. *International Journal of Economics and Financial Issues, 8*(2), 357-369.
- Ouattara, B.S. (2017). Re-examining stock market integration among Bricks countries. *Eurasian Journal of Economics and Finance, 5*(3), 109-132.
- Polanco-Martinez, J.M., Fernandez-Macho, J., Numann, M.B., & Faria S.H. (2018). A pre-crisis vs. crisis analysis of peripheral EU stock markets by means of wavelet transform and a nonlinear causality test. Physica A. 1211–1227.
- Seyingbo A., Fapetu, O., & Adeyeye, P. (2017).Exchange Rate Volatility and Stock Market Performance in Nigeria. *Nigerian Journal of Management Sciences, 6*(1).

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