

Effect of Covid-19 Pandemic on the Performance of the Nigerian Stock Exchange**Wali Sallau Abba**

Department of Finance, Bayero University Kano.

wsabba.fin@buk.edu.ng.**Abstract**

This study explored the effects of cumulative reported cases of COVID-19 on the performance of the Nigerian Stock Exchange(NGX). Using time series data analysis and employing Ordinary Least Squares Model (OLS), the research covered a period from March 2020 to February 2022, beginning from March 01, 2020, and ending 10 February, 2022. The study used market turnover, volume of transaction and number of deals as proxies of stock market performance in Nigeria, interest rate, exchange rate and inflation rate are used as control variables. The findings showed that there is evidence of causality between corona virus pandemic and stock prices in Nigeria. Furthermore, the COVID-19 cumulative reported cases have positive effects on market turnover and volume of transaction in stock market in Nigeria while the effect of cumulative reported cases on Number of deals is negative, the study's findings also found that interest rate, exchange rate and inflation rate also affect stock market performance negatively during the period of the study. It can therefore be concluded that coronavirus pandemic has significantly affect the performance of stock market in Nigeria during the period of the study. The study recommends that the Nigerian Exchange Group should improve online transactions in the stock market so that normal transaction could continue to take place during and after the COVID-19 pandemic to improve the performance of the market.

Introduction

The stock market is a segment of the financial market where long-term funds packaged in the form of securities, such as shares, stocks, bonds, debentures, loan stocks, and derivatives, are traded. The market is information driven, thus its indicators such as price index, returns, volatility, market capitalization, etc. are believed to be potentially influenced by the availability of information in the market (Babarinde, 2020).

Stock is a portion of the capital, which provides ownership of a firm. The investors invest in the stocks with the expectation of returns which is only possible in the price rise of the stocks invested, the stock return depends upon the firm-specific and macroeconomic variables (Konstantinos & Patroklos, 2021). Stock markets provide indices from which one can know about the market situation in brief and its volatility indicates the price movement of stocks traded in the market (Tek & Madai, 2022). The price volatility of the stock is highly affected by change in micro and macro-economic variables. COVID-19 triggered a significant economic downturn in Nigeria, primarily due to the disruption of global supply chains, a sharp decline in oil prices and the implementation of lockdown measures to curb the virus's spread. Oil is Nigeria's primary export and a crucial source of government revenue. The economic contraction was driven by declines in key sectors, including oil and gas, manufacturing, and trade. Inflation also surged during this period, reaching 15.75%, as the pandemic disrupted supply chains and led to shortages of goods, thereby driving up prices. The exchange rate was also volatile, with the naira depreciating against major currencies

due to reduced foreign exchange earnings and capital flight, as investors sought safer assets amid global uncertainty Alade et al., (2021).

The stock market is a well-regulated market that was intended to aid in the growth and development of a country's economy, as well as to act as a meeting point for highly rational investors. The stock market is not immune to or protected from the effect of information dissemination as it is capable of defining or redefining its values consistent with efficient market hypothesis. Disasters, sports, news, environmental issues, political changes, and epidemic outbreaks are recognized as major events that affect stock market returns (Arafa and Alber (2020).

Economies of whatever kind weather developed or developing respond to series scenarios, events, and or momentum internally or otherwise. The above scenarios might be policy stances or fluctuations and or technology innovation (Abu et al., 2022). The discovery and the continuous wide spread of the covid-19 in the late 2019 to early-2021 leads to serious economic and noneconomic crises across the globe and subsequently the slowdown of the overall economic activities, these problems push nations to come up with economic and non-economic policies to mitigates the effects of the pandemic and also to stimulate the overall economy on the other hand. Nigeria economy through its different sectors as well as sub-sectors of the economy cannot be an exemption.

Numerous studies have been conducted to investigate the effect of covid-19 pandemic on the stock market and overall economic performance. However, these studies were mostly conducted during the early stage of the pandemic when the overall economic activities were severely affected, (Babaride et al., 2020, Bello et al., 2020; Abu et al 2021; Raifu, 2021). In the same vein economic policies that was triggered as a result of the outbreak had also impacted the overall economic activities through various sectors and sub-sectors of the economy. Even though most of the studies reviewed are event studies. Therefore, making the results and findings of these studies inconsistent and inconclusive due the fact that the pandemic was active during the studies period, the degree of severances of the pandemic differs in terms of region, country and the level of development of a nation as well. Some studies were conducted on single country basis, some were cross country studies and at the same time some studies concentrated on the developing countries while some were on developed ones.

Against this backdrop, this study focused and concentrates on the Nigerian economy and to be specific the Nigerian stock market because of the following reason. Firstly, it was identified that many early studies focused on the early affected economies, the developed nations with developed stock market like China, the USA and some of the European and Asian countries along few studies on the developing countries.

A number of studies have been conducted that adopted different econometrics techniques, but most of these studies conducted especially in Nigeria nexus adopted models and techniques that are not appropriate such as regression models inform of Error correction model, vector error correction model, among others. (Bello et al., (2021), Raifu et al. (2021), Ashraf (2020), Farooq et al. (2022), Michael et al. (2022), Abu et al., 2020; Umar et al. 2022; Babangida et al., 2020; Babarinde 2020; Aladei et al., 2021).

This study used OLS model to explore the effect of covid-19 pandemic on the Nigerian stock market performance during the study period. In economic and finance, it is evident that, the most robust, prepared and recognized models that capture the time varying variables are OLS, ARCH

and GARCH Models. (Weiqing et al., (2021; Ainine 2021; Karki, (2022); Jordan et al., (2021; pabitra and Santosh 2021; Mela and Usman 2022; Moday et al. 2022; Fakunmoju et al., 2022; Khan et al., 2023; Logun 2023).

Therefore, the study examines how cumulative reported cases of Covid19 pandemic affects the stock market performance in Nigeria between March 2020 to February 2022.

The broad objective of this study is to assess the effect of COVID-19 pandemic on stock market performance in Nigeria from March 2020 to February 2022.

The research will help in formulating appropriate economic policies and measures to attract investment, mitigate future crises and forecasting to help maintain the stock market stability during and after the pandemic. Government agencies responsible for economic planning and development will benefit from the study.

The study will assist investors and operators in the Nigerian Exchange Group (NGX) and other regulators to formulate policies and rules that will continue to enhance the stock exchange market to operate in an efficient manner towards ensuring economic growth and development, stock brokers can identify promising investment prospects and capitalize on emerging trends, the study findings can also help stock brokers to adjust their investment portfolios and risk management strategies accordingly, the findings can as well enables brokers to construct well-balanced portfolios that can withstand market shocks and lastly stock brokers can offer timely and informed recommendations to clients, helping them navigate volatile market conditions and achieve their financial goals.

The study can also be of significance to the academia and other researchers that are interested in exploring on the stock market performance in Nigeria scholars and researchers can also find this study as a useful basis for carrying out further studies there by adding value to the existing literature on the relationship between covid-19 pandemic and stock market performance.

The study covers the period from 01st March 2020 to February 10th 2022. This is because the first case of the Covid19 was reported on 1st March 2020 and by February 2022 the Pandemic began to pass out. The choice of the period is to examine actual effect of the Covid19 pandemic on the stock market performance throughout the pandemic period.

Literature review

Concept of Stock Market Performance

Stock market performance refers to the overall returns and changes in value of a particular stock market or a collection of stocks over a specific period. It is a measure of how well the stock market as a whole, or individual stocks within it, have performed in terms of generating investment returns for investors, (Eleftheriou and Patsoulis, 2020).

Stock market performance is influenced by various factors, including economic conditions, corporate earnings, interest rates, geopolitical events, investor sentiment, and market speculation. Positive stock market performance typically reflects a growing economy, strong corporate profits, and optimistic investor sentiment, leading to an increase in stock prices. Conversely, negative stock market performance may occur during economic downturns, poor corporate earnings, or investor pessimism, resulting in declining stock prices (Babarinde, 2021).

Stock market performance is often measured using stock market indices, such as the S&P 500, Dow Jones Industrial Average, or NASDAQ Composite. These indices track the performance of a specific set of stocks and provide a benchmark against which individual stocks or investment portfolios can be compared (Ruifu, 2021).

Investors and analysts use stock market performance to evaluate the overall health of the economy, assess investment opportunities, and make investment decisions. Positive stock market performance is generally seen as a sign of economic prosperity and can lead to increased investor confidence and capital inflows. However, stock market performance is subject to volatility and fluctuations, and past performance is not necessarily indicative of future results.

It's important to note that stock market performance does not guarantee positive returns for all investors. Individual stock selection, diversification, risk tolerance, and investment strategies play significant roles in determining an investor's actual returns.

The most common stock market performance measure is the price earnings ratio, to determine P/E Ratio, market per share divided by earning per share multiply by 100 equal to price earnings ratio. This is calculated by dividing the market capitalization by net income. This is often done on a per share basis. Inaccurately this represents the number of years' earnings reflected in the share price. However, this interpretation ignores the growth expected in earnings and the time value of money. It is emphasized that although the market per share is used as the way to value companies, it is actually a ratio that is determined by the valuation process (Raifu, 2021).

The aggregate stock market performance, including market returns, commodity-specific stock returns, and price volatility, have been claimed to be to some extent influenced by investors' emotions. Such influences are demonstrated by correlations with different external factors ("mood proxies") assumed to evoke responsive investors' incidental emotions (anticipatory emotions or moods, e.g., hope, excitement, fear, anxiety) as well as emotion responses to market outcomes (e.g., elation, disappointment, regret). The most common measures of performance are the market indexes, with the Dow Jones Industrial Average and the S&P 500 being the most popular.

Stock Market

Stock Market, also called equity market, is an aspect of the capital market where shares and stocks and other equity instruments are traded. A stock market is a financial market where long-term financial securities in the form of shares, stocks, and other equity instruments and securities are traded. The Nigerian Exchange Group (NGX) is the platform of the Nigerian stock market. It is an aspect of the capital market of which debt market, derivative market and a market for any long-term financial assets and liabilities are other aspects (Babarinde et al., 2024).

Stock market performance refers to the overall returns and changes in value of a particular stock market or a collection of stocks over a specific period. It is a measure of how well the stock market, or individual stocks within it, have performed in terms of generating investment returns for investors, (Eleftheriou & Patsoulis, 2020).

Nigerian Exchange Group (NXG)

The NGX (formerly NSE) refers to an avenue which allows governments and businesses to raise long-term capital to undertake development projects as well as expand and modernize their operations. This indicates that the NGX is a market for trading various types of long-term

securities. The Nigerian Exchange Group (NGX) offers the necessary facilities, rules, and processes to enable healthy market competition and growth (Madai and Tek 2021).

Concept of Corona Virus 2019 (Covid-19):

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). The disease was first identified in December 2019 in Wuhan, Hubei Province, China, and rapidly spread globally, leading to an unprecedented pandemic declared by the World Health Organization (WHO) on March 11, 2020. COVID-19 has also been described as contagious in effect not only medically but financially, causing anxiety among investors (Babarinde et al., 2020).

Concept of Cumulated Reported Cases

Cumulative reported cases refer to the total number of documented instances of a particular condition or disease over a specific period, typically from the onset of an outbreak or the beginning of a tracking effort. This metric aggregates all confirmed cases, including new, active, recovered, and fatal cases, without subtracting recoveries or deaths. It serves as a key indicator in public health, enabling the tracking of disease progression and informing response strategies (Babarinde, 2024)

The Concept of Control Variables

Interest Rate (IR)

The stock market often reacts quickly to interest rate changes. When banks are lending money more cheaply with a lower interest rate, this can be passed into the consumer by lenders, keeping the rates lower for borrowing as well. Traders are affected by these interest rates as they can affect the price of stocks, causing them to move up or down (Hermuningsih *et al.*, 2024). Interest rates impact the stock market mainly in two ways. Firstly, lower interest rates can mean more public spending and increased business growth - stock prices rise. Secondly, higher interest rates can mean cuts in public spending and limited business growth - Stock prices fall, Hermuningsih *et al.*, (2024).

Exchange Rate

The exchange rate is the price of a country's currency measured or represented in another currency. Exchange rates are incredibly significant in purchasing decisions because they allow us to translate prices from several nations into a common language. The exchange rate, also widely recognized as the currency exchange rate, determines the value of two currencies (Hong *et al.*, 2021). Changes in the value of the Naira will impact the economy. The relationship between stock market and exchange rate remains unclear, but financial theory suggests that firm value is influenced by exchange rates and interest rates (Adaramola *et al.*, 2022). COVID-19 has significantly impacted the relationship between exchange rate and stock returns in Japan (Narayan *et al.*, 2020).

Inflation Rate

Inflation is a continuous price rise, often linked to an overheated economy where demand exceeds capacity, leading to higher prices. It is a monetary phenomenon caused by the depreciation of the monetary unit of commodities. All countries must implement policies to prevent inflation from exceeding the government's standard limit for citizens and currency rates (Ali *et al.*, 2024; Kumari

et al., 2024). In general, economists believe that inflation reduces the purchasing power of money for goods and services, the size of which is determined by the elasticity of demand and supply for goods and services. Other factors influencing changes in the overall price level include government regulations governing price levels, such as price restrictions and consumer subsidies.

Empirical Review

Arafa & Alber (2020); Babangida et al, (2020); Qing He et al, (2020); Babarinde (2020); Abu, et al, (2020); Khan et al, (2020); Al-afeef, et al, (2020); Jelilov et al, (2020); Abu et al, (2021); Raifu et al, (2021); Aladei et al, (2021); Kouki et al, (2021); Khanthavit, (2021); Li, et al., (2021); Hung et al., (2021); Ali et al., (2021); Madai (2021); Ainine and Nugroho (2021); Hatmanu and Cautisanu (2021); Adnan (2023); Alzyadat and Asfoura (2021); Utomo and Hanggraeni (2021); Yong et al, (2021); Mishra and Mishra (2021); Zangourana, et al, (2021); Fasanya et al., (2023); Min (2022); Tondl (2022); Madheswaran et al, (2022); Zhao et al, (2022); Athari et al, (2023); Ji at el, (2022); Naidu and Ranjeeni (2022); Babarinde et al, (2022); Karki (2022); Dogo and Aras (2022); Bello et al, (2022); A study by Aldrin et al, (2022); Adenomom et al, (2022); Fakunmoju et al, (2022); Adaramola et al, (2022); Nguyen et al, (2022); Insaideo (2023); Adenike (2022); Ghosh and Bhattacharya (2022); Fasanya et al, (2022); Saleem et al, (2023); Abdulrahman et at., (2023); Ncube et al, (2023); Samitas et al, (2023); Khan (2024); Kumari et al, (2023); Logun (2023); Harjoto and Rossi (2024); Ekechukwu et al., (2024); Paterson et al., (2024); Babarinde et al., (2024); Hermuningsih et al (2024);

This study contributes to the existing literatures by filling the gaps identified from the related literature reviewed. The gaps identify are as follows: first most of the prior studies reviewed has failed to introduce control variables, for the purpose of this thesis the researcher introduced some macroeconomics variables which are exchange rate, interest rate and inflation rate as control variables. That means not only covid-19 pandemic affect stock market performance but there are other variables which the study introduced.

Most of the prior studies reviewed so far, have applied one or more econometric method over different period of time investigate, assess, and analysed the effect of covid-19 pandemic confirm cases and death cases on the stock market return and volatility, or covid-19 confirmed cases, deaths and Government policies on the reaction and performance of stock market return and Volatility across the globe and also Few studies have examined post-2020 stock market performance in Nigeria using weekly/monthly transaction-level data with cumulative COVID-19 data. However, these studies were conducted on different dimension in terms of methodology employed, period covered, regions covered, individual country and a panel of countries covered, in fact some of the studies were conducted based on the level of development of the countries and their stock markets while some were conducted based on the severity of the pandemic. (For example, Amr & Nader2020; Qing He et al. 2020; Karamat et al. 2020, Arafa et al. 2020; Aldrin et al 2021; Anya 2021; Konstantios & Patroklos 2021; Hatmanu, M., & Cautisanu, C. 2021; Adnan 2021; Cristian & Dewi 2021; Pabitra & Santosh 2021; Zhao et al 2022 etc.)

In the Nigerian context the studies conducted mainly covered the early period of the pandemic mostly from January 2020 up to December, 2020 (Babangida et al. 2020; Babaride et al. 2020; Abu et al. 2020; Abu et al 2021; Raifu, 2021; Abdullah et al. 2020; Ashraf, 2020, Konstantinos & Patroklos 2021 etc. Most of these studies did not take into consideration the number of deals to covid-19 pandemic as a variable that can measure stock market performance during the outbreak.

Also most of the studies employed models that assess only the impact of covid-19 pandemic on the stock market return some examining the effects of covid-19 pandemic on the stock market return and volatility.

Theoretical Framework

This study used Efficient Market Hypothesis as the underpinning theory because, in the stock market information is a major driver of stock returns and volatility, the information could be both asymmetric or symmetric with significant consequences for stock return volatility. Therefore, the study has selected the theory of efficient market hypothesis based on the extant of Babarinde (2020); Anya (2021); & Abdullah and Mansour (2021).

Methodology

This section provides the research methodology that the study employs in investigating the effect of covid-19 pandemic on the stock market performance in Nigeria. The methodological approach selected is decisive in addressing the research questions, testing hypotheses, and drawing meaningful conclusions from the data.

Research Design

The study employs time series research design to depict the relationship between covid-19 total affect cases and the stock market performance in the Nigerian Exchange Limited for three years. This design requires the assessment of the influence of past variables on the current occurrence or event. Agburu (2001) describes time series research design as an enquiry to determine whether, and to what degree the occurrence of the current event has been affected by a variable or event that occurred in the past. The time series research design discusses the nature of two or more variables.

Method of Data Collection

The study used Secondary data in sourcing all the information on the variables, daily data on covid-19 cases was collected from the Nigerian Centre for Disease Control (NCDC) Situation report and for the stock market performance, the weekly data was obtained from Nigerian exchange group (NGX) annual report.

Method of Data Analysis

The collected data was estimated based on linear regression model using the Ordinary Least Square (OLS) method. This technique is well-suited for capturing variations in covid-19 pandemic and stock market performance using a time series data for the period from 01/03/2020 to 10/02/2022. Prior to the estimation a unit root test was conducted to ascertain the time series properties of the data and the variables were found to be stationary at levels.

Model Specification

The Model of Bukonla & Akinwande, (2012) is modified and used in this study. Their model is specified as:

$$LNSEDX = \beta_0 + \beta_1 LEXC + \beta_2 CPI + \beta_3 INT + \beta_4 Mg + \beta_5 RPCIg + u$$
 Where: LNSEDX = Log of NSE all share index; LEXC= log of Official Exchange rate (N1=\$) CPI= percentage change in Consumer Price Index i.e. inflation rate. INT= Interest Rate i.e. Lending rate M2g= Annual growth

rate of Broad money supply $RPCI_g$ = Annual growth rate of Real Per capita income β_0 = Intercept
 β_1 -5 = slope of the explanatory variables u = Stochastic or error term.

This study used three indicators for stock market performance in three equations, also exchange rate interest rate and inflation rates are used as controlled variables while the cumulative reported Covid-19 Cases is included to capture the impact of covid19 on the stock market performance as below:

For objective i,

$$TOV = \beta_0 + \beta_1 Covid19 + \beta_2 IFR + ei \dots \dots \dots i$$

Where:

TOV = turnover of stock market

Covid19 = cumulative reported Covid-19 Cases

IFR = Inflation Rate

ei = error term

The model two of the study was used to achieve objective two of the study.

$$VOT = \beta_0 + \beta_1 Covid19 + \beta_2 EXR + ei \dots \dots \dots ii$$

Where:

Covid19 = cumulative reported Covid-19 Cases

VOT = volume of transaction of stock market

EXR = Exchange Rate

ei = error term

The model three of the study was used to achieve objective three of the study.

$$NOD = \beta_0 + \beta_1 Covid19 + \beta_2 INR + ei \dots \dots \dots iii$$

Where:

Covid19 = cumulative reported Covid-19 Cases

NOD = Number of deals of stock market

INR = Interest Rate

ei = error term

Data Presentation, Analysis and Interpretation

Introduction

This is the chapter where the data collected were analysed. The chapter discusses the result of descriptive statistics, unit root test, and the OLS regression for the three models specified.

Descriptive Statistics

Another requirement of time series research is to construct a descriptive statistics table in order to show the characteristics of the data set and shape of the data distribution. Table 4.2 presents the descriptive statistics.

Table 1 Summary of Descriptive Statistics

	COVID19	NOD	TURNOV ER	VOLUME	EXR	IFL	ITR
Mean	362.1606	4199.766	3810.635	354.1515	399.7554	16.15708	11.64634
Median	205.5000	4107.500	2938.185	270.6900	410.1210	16.46635	11.50000
Maximum	4035.000	13433.00	42966.43	9360.010	416.9500	18.17137	13.50000
Minimum	0.000000	0.000000	0.000000	0.000000	326.6250	12.25732	11.50000
Std. Dev.	423.0997	1615.338	3732.862	484.0792	19.03975	1.634721	0.445533
Skewness	2.720749	0.203078	4.825324	13.57550	-1.540614	-0.904436	3.127530
Kurtosis	16.10249	7.252273	40.26084	245.9407	5.316492	3.123394	12.00771
Jarque-Bera	4126.347	374.0592	30370.85	1225026.	304.6322	67.38849	2465.425
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	178183.0	2066285.	1874832.	174242.5	196679.7	7949.285	5730.000
Sum Sq. Dev.	87895572	1.28E+09	6.84E+09	1.15E+08	177993.4	1312.105	97.46341

Source: Author's Compilation with Eviews, Version 9 (2025)

The statistical distribution of the daily Covid19 reported cases, transactions of the Nigerian stock market and some macroeconomic variables data for the work is presented on table 1. It was found that, there are 492 observations and for the macroeconomic variables found 492 observations in the study, the mean for the Covid-19 cases was 362.1606, maximum and minimum value of 4035.000 and 0.000000 respectively. Covid-19 cases have Standard deviation of 1.299144 which is below the mean and indicated low variability from the mean. The turnover has a mean of 8.071918, maximum of 10.66817 and minimum of 6.801828. The standard deviation has a value of 0.603050 and is less than the mean, implying that there is low variability with respect to

measuring turnover. The volume of transaction indicated a mean of 5.714069, maximum of 9.144202 and minimum of 4.620945. Standard deviation has 0.527675 and is below the means which shows a low variability in measuring the value of transaction. With respect number of deals, the mean value has 8.371709, maximum and minimum has 9.505470 and 7.636270 respectively. The standard deviation has 0.536288 which is lower than the mean and shows a low variability in measuring the volume of transactions. The mean for number of deals is 8.365380, maximum and minimum are 9.505470 and 7.636270 respectively. The standard deviation has a value of 0.242001 and implied a low variability in measuring number of deals. The mean for number of exchange rate is 399.7552, maximum and minimum are 416.9500 and 326.6250 respectively. The standard deviation has a value of 19.03975 and implied a low variability in measuring the exchange rate. Also The mean for inflation rate is 16.15708, maximum and minimum are 18.17137 and 12.25732 respectively. The standard deviation has a value of 1.634721 and implied a low variability in measuring inflation rate. Likewise, the mean interest rate is 11.64634, maximum and minimum are 13.50000 and 11.50000 respectively. The standard deviation has a value of 0.445533 and implied a low variability in measuring interest rate.

The skewness for Covid19 cases has a negative skewness with value of -0.756050. While, turnover, volume of transaction and number of deals have a positive value of 0.663540, 1.299222 and 0.934216 respectively also exchange rate, inflation has a negative value of -1.5406492 and -0.904436 while interest rate has a positive value of 3.127530 and these indicated a positive skewness of the variables. The Jaque Bera probability value for Covid19, turnover, volume of transaction and number of deals, exchange rate, inflation and interest rate for all the variables are 0.000000 and are all less than 5%. This implied that the data for the study is normally distributed.

Unit Root Test

Variable	ADF Statistics	Critical Value	Percentage	Order of Integration
TURNOVER	-7.976390	-2.867195	5%	I(0)
VOLUME	-19.47463	-2.867159	5%	I(0)
NOD	-6.320712	-2.867195	5%	I(0)
COVID19	-3.576419	-2.867444	5%	I(0)
IFL	-10.220420	-2.867195	5%	I(0)
ITR	-6.318097	-2.867255	5%	I(0)
EXR	-9.653325	-2.867159	5%	I(0)

Source: Author's Compilation from Eviews, version 9 (2025)

In order to test the stationary of the data for the study. The unit root test has been carried out. The data for the study included. Table 2 showed the result of the unit root test for the weekly data (1st March, 2020 to 10th February, 2022). ADF results showed that the weekly data for the variables of the study are stationary at level and at 5% level of significance, though the variables are also stationary at both 1% and 10%. The stationarity is based on comparing the absolute value of respective ADF test statistics and the critical values and from the results all the ADF test statistics are higher than the critical values. Also looking the p values all the variables have p values of less than 0.05 (5%) which also confirmed that they are stationary at levels. Based on the result of stationarity test the adoption of ordinary least squares as technique of estimating the three models is appropriate.

Table 3: OLS Results Model i (Dependent Variable TURNOVER)

Variable	Coefficient	Std. Error	t Statistics	p value
C	8091.980	1670.421	4.844275	0.0000
COVID19	2.238272	0.396025	0.620659	0.0547
IFL	270.3234	102.4996	2.637311	0.0086
R Squared	0.147030			
F stat.	3.655600	Prob(F-statistic)	0.026555	

Source: Author's Compilation from Eviews, version 9 (2025)

The OLS results presented in Table 3 shows that both Covid19 cumulative reported cases and inflation have positive impact on the turnover of stock market during the period of the study. Specifically, with an increase in one reported covid19 case the turnover will increase by 2.2382 and based on the p value of 0.000 the covid19 reported cases are found to be statistically significant in explaining the variation of turnover of stock market. with regards to inflation rate, theoretically it is supposed to have a positive impact on the turnover of stock market as the higher the prices of stocks the more attractive they become, the coefficient of inflation rate in in this model revealed that if it increase by one unit then the turnover will increase by 270.32 conforming with the theoretical postulations and based on the p value of 0.000 inflation rate is statistically significant in explaining the variation of stack market turnover during the period of the study. The r squared is 0.147 implying that about 15% of the variation of stock market turnover is being accounted by both the intercept, the covid19 cumulative reported cases and the inflation rate during the period of the study while the rest of the variation is being taken care of by the random error term. The F statistics which measures the joint significance of the independent variables is 3.655600 with a p value of 0.026 suggesting that the independent variables are jointly significant in explaining the variation of stock market turnover during the period of the study.

Table 4: OLS Results Model ii (Dependent Variable VOLUME)

Variable	Coefficient	Std. Error	t Statistics	p value
C	579.0887	461.9396	1.253603	0.0106
COVID19	0.053440	0.051767	1.032312	0.0304
EXR	-0.611101	1.150360	-0.531226	0.0455
R-squared	0.188901			
F-statistic	4.711308	Prob(F-statistic)	0.091509	

Source: Author's Compilation from Eviews, version 9 (2025)

The OLS results presented in Table 4 showed that both Covid19 cumulative reported cases and exchange rate are statistically significant based on their respective p values of 0.0304 and 0.0455 which are all less than 0.05. Covid19 cumulative cases have positive coefficient of 0.05344 signifying that an increase in one reported case of covid-19 will lead to an increase in the volume of stock market trading by 0.053 with regards to exchange rate the relationship based on the result is 0.611 appropriate expectation exchange rate can impact the volume of stock market trading either positively or negatively depending on the circumstance at hand. In this case the negative relationship might be due to the fact that the period of study is associated with lockdown to enforce physical and social distancing in order to reduce the spread of the pandemic which made a lot of companies to limit their production and hence the volume of trading declined. The r squared is 0.188 implying that about 19% of the variation of volume of trading is being accounted by both

the intercept, the covid19 cumulative reported cases and the exchange rate during the period of the study while the rest of the variation is being taken care of by the random error term. The F statistics which measure the joint significance of the independent variables is 4.711308 with a p value of 0.091 suggesting that the independent variables are jointly insignificant in explaining the variation of stock market turnover during the period of the study.

Table 5: OLS Results Model ii (Dependent Variable NOD)

Variable	Coefficient	Std. Error	t Statistics	p value
C	3680.628	1910.910	1.926113	0.0347
COVID19	0.103012	0.172576	0.533906	0.0308
ITR	-4.371193	-13.84568	0.252442	0.0418
R-squared	0.238060			
F-statistic	3.210465	Prob(F-statistic)	0.040280	

Source: Author's Compilation from Eviews, version 9 (2025)

The OLS results presented in Table 5 shows that Covid19 cumulative reported cases has a positive impact on the Number of deals (NDD) of stock market during the period of the study. Specifically, with an increase in one reported covid19 case the number of deals will increase by 0.1030 and based on the p value of 0.030 the covid19 reported cases are found to be statistically significant in explaining the variation of number of deals of stock market. with regards to interest rate, appropriate expectation it is supposed to have a negative sign as the higher the interest rate the higher will be the cost of capital and the lower the production and hence the lower the number of deals, the coefficient of interest rate in in this model carries correct sign and revealed that an increase in interest rate by one unit then the number of deals will decrease by 4.37 conforming with the theoretical postulations and based on the p value of 0.0418 interest rate is found to be statistically significant in explaining the variation of number of deals during the period of the study. The r squared is 0.238 implying that about 24% of the variation of number of deals is being accounted by both the intercept, the covid19 cumulative reported cases and the interest rate during the period of the study while the rest of the variation is being taken care of by the random error term. The F statistics which measure the joint significance of the independent variables is 3.210465 with a p value of 0.040280 suggesting that the independent variables are jointly significant in explaining the variation of number of deals of stock market during the period of the study.

Policy Implications of Findings

Based on the first hypothesis of the study, it was discovered that cumulative reported Covid19 cases and inflation rate have positive impact on turnover of stock market in Nigeria during the period of the study. In addition, it was found that cumulative reported Covid19 cases has a significant effect on the turnover of stock market in Nigeria for the period of the study.

In the case of the second hypothesis of the study, it was found that, the cumulative Covid19 reported cases also have a significant effect on volume of transaction of the stock market in Nigeria for the period of the study. Equally, it was found that, cumulative Covid19 reported cases has a positive effect on the volume of transaction of stock market in Nigeria. Exchange rate however have a negative but significant impact on the volume of transactions during the period of the study.

Finally, with regard to the third hypothesis of the study, it was discovered that, cumulative Covid19 reported cases has a significant effect on the number of deals of the stock market in Nigeria for the

period of the study. Also, the findings showed that, cumulative Covid19 reported cases have a positive effect on the number of deals of the stock market in Nigeria. The interest rate has a significant negative impact on the number of deals in the stock market conforming to theoretical postulations.

A closer inspection of the result showed that the cumulative reported cases of covid19 pandemic in all the three models have positive impact on the stock market performance indicators (turnover, volume of trading and number of deals) this might perhaps be due to the fact that with lockdown many investors paid more attention to stock trading and since many activities are halted a lot have shifted their resources to stock market informs of trading online which is possible with despite the enforcement on physical and social distancing by the government in order to limit the spread of the pandemic.

Summary, and Recommendations and Conclusion

Summary of the Major Findings

The study examines the effect of covid-19 pandemic on the performance of Nigerian stock exchange market. The study employed the following variables: cumulative reported cases as proxies of covid-19 pandemic, volume of transaction, market turnover and number of deals as proxies of stock market performance. The study also incorporates exchange rate, interest rate and inflation rate as control variables. The statistical properties of data were tested using unit root test e.i Augmented Dickey Fuller and Phillips Perron. The test indicated that market turnover, volume of transactions and number of deals are stationery at first difference in other words are $I(1)$ process. Akaike information criteria (AIC) based on lag (1, 1, 0, 1) was used, the model is free from heteroscedasticity and serial correlation. Bound test for long run shows that f - statistics is 3.655 which is more than upper and lower bound critical values at 1%, 2.5%, 5%, and 10%. This indicated that there is a long run relationship among the variables employed.

The Ordinary least square regression shows that cumulative reported cases of covid-19 pandemic has a positive and statistically significant effects on turnover of stock market in Nigeria. The r squared is 0.147 implying that about 14.7% of the variation of stock market turnover is being accounted by both the intercept, the covid19 cumulative reported cases and the inflation rate during the period of the study while the rest of the variation is being taken care of by the random error term. The F statistics which measures the joint significance of the independent variables is 3.655600 with a p value of 0.026 suggesting that the independent variables are jointly significant in explaining the variation of stock market turnover during the period of the study. The findings also show that cumulative reported case of covid-19 pandemic has positive and statistically significant effect on volume of transaction in the Nigeria stock exchange market. The r squared is 0.188 implying that about 18.8% of the variation of volume of trading is being accounted by both the intercept, the covid19 cumulative reported cases and the exchange rate during the period of the study while the rest of the variation is being taken care of by the random error term. The F statistics which measure the joint significance of the independent variables is 4.711308 with a p value of 0.091 suggesting that the independent variables are jointly insignificant in explaining the variation of stock market turnover during the period of the study. Also the study's findings indicate that cumulative reported cases has a positive and statistically significant effect on number of deals of the stock market in Nigeria during the period of the study. The r squared is 0.238 implying that about 23.8% of the variation of number of deals is being accounted by both the intercept, the

covid19 cumulative reported cases and the interest rate during the period of the study while the rest of the variation is being taken care of by the random error term. The F statistics which measure the joint significance of the independent variables is 3.210465 with a p value of 0.040280 suggesting that the independent variables are jointly significant in explaining the variation of stock market turnover during the period of the study.

The short run relationship among the variables employed shows cumulative reported cases has a positive and statistically significant effects on turnover of stock market in Nigeria during the period of the study. Cumulative reported cases of covid-19 pandemic indicate positive and statistically significant effects on volume of transaction of the stock market in Nigeria during the period of the study. The R-squared and its adjusted value are very high the R-squared and its adjusted value are very high 0.843883, this implies that 84% change in stock market performance is explained by cumulative reported cases of covid-19 pandemic.

The study also found out that not only cumulative reported cases of covid-19 pandemic that affect stock market performance but also exchange rate, interest rate and inflation have a significant and statistical effect on the stock market performance.

Recommendations

Based on the findings of the study, the following recommendations were made:

The Nigerian Exchange Group should invest in digital infrastructure to ensure uninterrupted trading in future pandemics.

The Nigerian Exchange Group should improve online transactions in the stock market. So that online transaction could continue to take place even after the pandemic so that the performance of the market can be improved.

The number of participants in the stock market be should be increased by creating awareness on how to participate in the stock market, which will improve the volume of transactions in the stock market in Nigeria. Particularly, when online transaction is equally improved during a pandemic such as Covid19 pandemic.

The NGX should look at the possibility of increase the number of deals during a pandemic such as Covid19. This is because, it was found that, cumulative reported Covid19 case has a significant effect on number of deals in the stock market for the period of the study.

Conclusion

The following conclusions were drawn based on the findings of the study. The first objective of the study is to evaluate the effect of cumulative Covid19 reported cases on turnover of transaction of the stock market in Nigeria. It was found that, the cumulative reported Covid19 cases has a significant effect on the turnover of stock market in Nigeria for the period of the study. Therefore, it was concluded that the cumulative reported Covid19 cases has a significant effect on the turnover of stock market in Nigeria for the period of the study. This has shown that the cumulative reported Covid19 cases significantly affected the turnover of the stock market in Nigeria. This agrees with the conclusion by Nguyen et al, (2022) who concluded that, Covid19 reported cases has a significant effect on stock market return.

Furthermore, the second objective examine the effect of cumulative Covid19 pandemic reported cases on the volume of transaction of stock market in Nigeria. It was found that, the cumulative Covid19 pandemic reported cases has a significant effect on volume of transaction of the stock market in Nigeria for the period of the study. As such, it is concluded that, the cumulative Covid19 pandemic reported cases has a significant effect on volume of transaction in the stock market in Nigeria. Meaning that, cumulative Covid19 pandemic reported cases affected volume of transaction in stock market. But, with an insignificant effect. This conclusion is in line with Raifu (2021).

Moreover, the third objective of the study appraised the effect of cumulative Covid19 pandemic reported cases on number of deals of the stock market in Nigeria. The study revealed that cumulative Covid19 reported cases have an insignificant effect on the number of deals of the stock market in Nigeria. Therefore, the present study concluded that cumulative Covid19 reported cases have an insignificant effect on the number of deals of the stock market in Nigeria. This implies that the cumulative Covid19 reported cases has affected number of deals of stock market in Nigeria with an insignificant effect. This is in harmony with Adaramola et al. (2022).

Reference

- Abdulrahman, F. T., Nageri, K. I., Lawal, S. O., & Ibrahim, R. O. (2023). Analysis of the market efficiency of Nigerian stock market: Evidence from post COVID-19 lockdown. *Российский журнал менеджмента*, (4), 534-551.
- Adaramola, A. O., Kayode, P. A., Omotayo, V. A., & Ogiamien, O. F. (2022). Effect of Covid-19's Second Wave on the Nigerian Stock Market. *Journal of Business and Entrepreneurship*, 10(2), 145-160.
- Adaramola, A. O., Kayode, P. A., Omotayo, V. A., & Ogiamien, O. F. (2022). Effect of Covid-19's Second Wave on the Nigerian Stock Market. *Journal of Business and Entrepreneurship*, 10(2), 145-160.
- Adenike, T. E. (2022). The Impact of COVID-19 on the Nigeria Financial Market Performance. *J. Sus. Dev. Afr*, 24, 111-122.
- Adenike, T. E. (2022). The Impact of COVID-19 on the Nigeria Financial Market Performance. *J. Sus. Dev. Afr*, 24, 111-122.
- Adenomon, M. O., Maijamaa, B., & John, D. O. (2022). The effects of Covid-19 outbreak on the Nigerian Stock Exchange performance: Evidence from GARCH Models. *Journal of Statistical Modeling & Analytics (JOSMA)*, 4(1).
- Adenomon, M. O., Maijamaa, B., & John, D. O. (2022). The effects of Covid-19 outbreak on the Nigerian Stock Exchange performance: Evidence from GARCH Models. *Journal of Statistical Modeling & Analytics (JOSMA)*, 4(1).
- Adnan, A. T. M. (2023). Asian perspective of capital market performance amid the COVID 19 pandemic. *Asian Journal of Accounting Research*, 8(3), 210-235.
- Ainine Devara Nugroho, R. R. (2021). Determinant of Indonesian Stock Market's Volatility During the Covid-19 Pandemic. *Jurnal Keuangan Dan Perbankan*, 25(1), 1-20.

- Ainine Devara Nugroho, R. R. (2021). Determinant of Indonesian Stock Market's Volatility During the Covid-19 Pandemic. *Jurnal Keuangan Dan Perbankan*, 25(1), 1-20.
- Alade, M. E., Adeusi, S. A., & Alade, F. O. (2020). Covid-19 pandemic and Nigerian stock market capitalisation. *Ilorin Journal of Economic Policy*, 7(3), 12-23.
- Al-afeef, M. A., Al-Afeef, M. A. M., Al-Smadi, R. W., & Al-Smadi, A. W. (2024). The impact of covid-19 on financial markets performance: an empirical study in amman stock exchange. *Calitatea*, 25(199), 40-49.
- Ali, P., Mohamed, S., Kabel, D. T. M. S., & Soliman, M. A. M. (2024). The Effect of Covid-19 on The Egyptian Stock market. *I6(4)*, 685-663.
- Alzyadat, J. A., & Asfoura, E. (2021). The effect of COVID-19 pandemic on stock market: An empirical study in Saudi Arabia. *The Journal of Asian Finance, Economics and Business*, 8(5), 913-921.
- Anh, D. L. T., & Gan, C. (2021). The impact of the COVID-19 lockdown on stock market performance: evidence from Vietnam. *Journal of Economic studies*, 48(4), 836-851.
- Arafa, A., & Alber, N. (2020). The impact of coronavirus pandemic on stock market return: the case of the MENA region.
- Arafa, A., & Alber, N. (2020). The impact of coronavirus pandemic on stock market return: the case of the MENA region.
- Ashraf, B. N. (2020). Stock markets' reaction to COVID-19: Cases or fatalities? *Research in international business and finance*, 54, 101249.
- Asongu, S. A., & Acha-Anyi, P. N. (2019). The murder epidemic: A global comparative study. *International Criminal Justice Review*, 29(2), 105-120.
- Athari, S. A., Kirikkaleli, D., & Adebayo, T. S. (2023). World pandemic uncertainty and German stock market: evidence from Markov regime-switching and Fourier based approaches. *Quality & quantity*, 57(2), 1923-1936.
- Babarinde, G. F. (2020). Coronavirus and stock prices in nigeria: a vector autoregressive multivariate time series analysis. *African J Biol Med Res*, 3(3), 111-126.
- Babarinde, G. F. (2024). *Digital finance and stock market performance in Nigeria* (Doctoral dissertation, Department of Banking and Finance, Faculty of Business Administration, University of Nigeria, Enugu Campus).
- Babarinde, G. F., Adewusi, O. A., Abdulmajeed, T. I., & Hazieli, Y. H. (2022). Investors' sentiment in the nigerian stock market: does covid-19 matters? *The International Journal of Accounting and Business Society*, 30(2).
- Baig, A. S., Butt, H. A., Haroon, O., & Rizvi, S. A. R. (2021). Deaths, panic, lockdowns and US equity markets: The case of COVID-19 pandemic. *Finance research letters*, 38, 101701.

- Bello, Y. A., Adekunle, P. A., & Nwachukwu, U. G. (2022). Impact of COVID-19 pandemic on the Nigeria stock market: A sectoral stock prices analysis. *CBN Journal of Applied Statistics*, 13(1), 209-239.
- Chen, M. H., Jang, S. S., & Kim, W. G. (2007). The impact of the SARS outbreak on Taiwanese hotel stock performance: An event-study approach. *International journal of hospitality management*, 26(1), 200-212.
- Dan-Nwafor, C., Ochu, C. L., Elimian, K., Oladejo, J., Ilori, E., Umeokonkwo, C., ... & Ihekweazu, C. (2020). Nigeria's public health response to the COVID-19 pandemic: January to May 2020. *Journal of global health*, 10(2), 020399.
- Digdowiseiso, K., Juliandi, D., & Saputra, D. (2024). Implementation of signaling theory in financial management: a bibliometric analysis. *Revista De Gestão Social e Ambiental*, 18(3), 1-13.
- Digdowiseiso, K., Subiyanto, B., & Setioningsih, R. (2022). What drives environmental disclosure? Evidence from mining companies listed on the Indonesia stock exchange. *International Journal of Energy Economics and Policy*, 12(4), 32-39.
- Dogo, M. Y., & Aras, O. N. (2022). The impact of COVID-19 on stock market returns: Empirical evidence from Nigeria. *Eurasian Journal of Higher Education*, (6), 38-57.
- Ekechukwu, I. V., Uzoh, B. C., Adejoh, O. S., Dinne, C. E., & Nwogu, J. N. (2024). Covid-19 stock market experiences and local investors' investment decisions in lagos, nigeria: a pilot study. *Nigerian journal of social problems and social policy review*, 4(1).
- Eleftheriou, K., & Patsoulis, P. (2020). COVID-19 lockdown intensity and stock market returns: A spatial econometrics approach.
- Elsayed, A., & Abdelrhim, M. (2020). The effect of COVID-19 spread on Egyptian stock market sectors. *Available at SSRN 3608734*.
- Fakunmoju, S., Jegede, C. A., & Oluchi, A. (2022). Effects of Global Pandemic on Stock Liquidity in the Nigerian Stock Exchange. *EuroEconomica*, 41(1).
- Farooq, U., Nasir, A., & Bashir, M. F. (2022). The COVID-19 pandemic and stock market performance of transportation and travel services firms: a cross-country study. *Economic research-Ekonomska istraživanja*, 35(1), 6867-6883.
- Fasanya, I., Periola, O., & Adetokunbo, A. (2023). On the effects of Covid-19 pandemic on stock prices: an imminent global threat. *Quality & Quantity*, 57(3), 2231-2248.
- Ghosh, S., & Bhattacharya, M. (2022). Analyzing the impact of COVID-19 on the financial performance of the hospitality and tourism industries: an ensemble MCDM approach in the Indian context. *International Journal of Contemporary Hospitality Management*, 34(8), 3113-3142.
- Harjoto, M. A., & Rossi, F. (2023). Market reaction to the COVID-19 pandemic: evidence from emerging markets. *International Journal of Emerging Markets*, 18(1), 173-199.

- Hatmanu, M., & Cautisanu, C. (2021). The impact of COVID-19 pandemic on stock market: Evidence from Romania. *International Journal of Environmental Research and Public Health*, 18(17), 9315.
- He, Q., Liu, J., Wang, S., & Yu, J. (2020). The impact of COVID-19 on stock markets. *Economic and political studies*, 8(3), 275-288.
- Hermuningsih, S., Kari, F., Rahmawati, A. D., & Prajnanta, F. (2024). The role of profitability as a channel on influencing the effect of macroeconomics on stock returns in the Indonesian stock exchange during the covid-19 pandemic. *International Journal of Business & Society*, 25(1).
- Herwany, A., Febrian, E., Anwar, M., & Gunardi, A. (2021). The influence of the COVID-19 pandemic on stock market returns in Indonesia stock exchange. *The Journal of Asian Finance, Economics and Business*, 8(3), 39-47.
- Hung, D. V., Hue, N. T. M., & Duong, V. T. (2021). The impact of COVID-19 on stock market returns in Vietnam. *Journal of Risk and Financial Management*, 14(9), 441.
- Ibikunle, G., & Rzayev, K. (2020). Volatility, dark trading and market quality: evidence from the 2020 COVID-19 pandemic-driven market volatility.
- Insaiddoo, M. (2023). *Covid-19 Pandemic and Financial Markets' Performance: The Role Of Development Status, Financial Globalisation, And Trade Openness* (Doctoral dissertation, University of Cape Coast).
- Insaiddoo, M., Arthur, L., Amoako, S., & Andoh, F. K. (2021). Stock market performance and COVID-19 pandemic: evidence from a developing economy. *Journal of Chinese Economic and Foreign Trade Studies*, 14(1), 60-73.
- Insaiddoo, M., Ullah, A., Dziwornu, R. K., Amoako, S., & Abdul-Mumuni, A. (2023). COVID-19 pandemic and stock market performance: a comparative study of emerging economies. *Heliyon*, 9(5).
- Jelilov, G., Iorember, P. T., Usman, O., & Yua, P. M. (2020). Testing the nexus between stock market returns and inflation in Nigeria: Does the effect of COVID-19 pandemic matters? *Journal of Public Affairs*, 20(4), e2289.
- Ji, X., Bu, N., Zheng, C., Xiao, H., Liu, C., Chen, X., & Wang, K. (2024). Stock market reaction to the COVID-19 pandemic: an event study. *Portuguese Economic Journal*, 23(1), 167-186.
- Karki, D. (2022). Navigating the new normal: Performance of stock market during pandemic. *Pravaha*, 28(1), 119-132.
- Katterbauer, K., Syed, H., Genç, S. Y., & Cleenewerck, L. (2022). Environmental compliance and financial performance of shariah-compliant enterprises—A data-driven analysis. *Revista De Gestão Social E Ambiental*, 16(2), e03043.
- Khan, K., Zhao, H., Zhang, H., Yang, H., Shah, M. H., & Jahanger, A. (2020). The impact of COVID-19 pandemic on stock markets: An empirical analysis of world major stock indices. *The Journal of Asian Finance, Economics and Business*, 7(7), 463-474.

- Khan, M. N. (2024). Impact of COVID-19 Crisis on Volatility Spillovers across Global Financial Markets. *Journal of Economic Integration*, 39(2), 373-393.
- Khanthavit, A. (2021). Measuring COVID-19 effects on world and national stock market returns. *The Journal of Asian Finance, Economics and Business*, 8(2), 1-13.
- Khanthavit, A. (2021). Measuring COVID-19 effects on world and national stock market returns. *The Journal of Asian Finance, Economics and Business*, 8(2), 1-13.
- Kouki, R., Khalaf, L. S., & Wadi, R. M. A. (2021). The Stock Markets Response during the Coronavirus: Evidence from Saudi Banking Sector. *J. Legal Ethical & Regul. Isses*, 24, 1.
- Kumari, V., Rai, V. K., & Pandey, D. K. (2023). Impacts of pandemic-related stimulus packages on the stock market: evidence from India and the USA. *International Journal of Indian Culture and Business Management*, 29(2), 271-292.
- Li, W., Chien, F., Waqas Kamran, H., Aldeehani, T. M., Sadiq, M., Nguyen, V. C., & Taghizadeh-Hesary, F. (2022). The nexus between COVID-19 fear and stock market volatility. *Economic research-Ekonomska istraživanja*, 35(1), 1765-1785.
- Lopatta, K., Alexander, E. K., Gastone, L. M., & Tammen, T. (2020). To report or not to report about Coronavirus? The role of periodic reporting in explaining capital market reactions during the COVID-19 pandemic. *The Role of Periodic Reporting in Explaining Capital Market Reactions During the COVID-19 Pandemic (April 3, 2020)*.
- Madai, T. B. (2023). Impact of COVID-19 pandemic on stock market returns. *KMC Journal*, 5(1), 261-280.
- Madheswaran, M., Lingaraja, K., & Duraisamy, P. (2024). Econometric and stochastic analysis of stock price before and during COVID-19 in India. *Environment, Development and Sustainability*, 26(3), 7579-7594.
- Min, C. P. (2022). Impact of Tweens' (Ages 8–12) Leadership Experience Over Other Children as Children Shepherds in House Church Ministries on Their Self-Concept Development as They Build Up the Body of Christ. *Christian Education Journal*, 19(3), 436-459.
- Mishra, P. K., & Mishra, S. K. (2021). COVID-19 pandemic and stock market reaction: empirical insights from 15 Asian countries. *Transnational Corporations Review*, 13(2), 139-155.
- Naidu, D., & Ranjeeni, K. (2021). Effect of coronavirus fear on the performance of Australian stock returns: Evidence from an event study. *Pacific-Basin Finance Journal*, 66, 101520.
- Ncube, M., Sibanda, M., & Matenda, F. R. (2023). COVID-19 Pandemic and Stock Performance: Evidence from the Sub-Saharan African Stock Markets. *Economies*, 11(3), 95.
- Nguyen, C. T., Hai, P. T., & Nguyen, H. K. (2021). Stock market returns and liquidity during the COVID-19 outbreak: evidence from the financial services sector in Vietnam. *Asian journal of Economics and Banking*, 5(3), 324-342.
- Nigerian Centre for Disease control (NCDC) *daily reports on covid 19 cases (2020)*

- Novitasari, D., Goestjahjanti, F. S., & Asbari, M. (2020). The Role of Readiness to Change between Transformational Leadership and Performance: Evidence from a Hospital during Covid-19 Pandemic. *APMBA (Asia Pacific Management and Business Application)*, 9(1), 37-56.
- Osagie, M., Maijamaa, B., & Owoicholofu, D. (2020). On the effects of Covid-19 outbreak on the Nigerian stock exchange performance: Evidence from GARCH Models. *Preprints [online]* doi, 10.
- Ozili, P. (2022). COVID-19 in Africa: socio-economic impact, policy response and opportunities. *International Journal of Sociology and Social Policy*, 42(3/4), 177-200.
- Putri, R. N. (2020). Indonesia dalam menghadapi pandemi Covid-19. *Jurnal Ilmiah Universitas Batanghari Jambi*, 20(2), 705-709.
- Raifu, I. A., & KUMEKA, T. T. (2023). The effects of the covid-19 pandemic on stock market performance in Africa. *Journal of Business and Economic Analysis*, 6(01), 109-136.
- Rakshit, B., & Neog, Y. (2022). Effects of the COVID-19 pandemic on stock market returns and volatilities: evidence from selected emerging economies. *Studies in Economics and Finance*, 39(4), 549-571.
- Safiyanu, B. D., Isa, M., & Lawan, I. I. (2020). Impact of COVID-19 on the Nigerian Stock Exchange Market.
- Saleem, A. M., Mustafa, H. M., Asaad, Z. A., & Al-Delawi, A. S. (2023). Regional Stock Market Efficiency at Weak Form after the Covid-19 Vaccination Approval. *International Journal of Economics and Financial Issues*, 13(6), 63-70.
- Samitas, A., Kampouris, E., & Polyzos, S. (2022). Covid-19 pandemic and spillover effects in stock markets: A financial network approach. *International Review of Financial Analysis*, 80, 102005.
- Schoenfeld, J. (2020). The invisible risk: Pandemics and the financial markets. *Tuck School of Business Working Paper*, (3567249).
- Soyode, (1997) To word efficient Petroleum industry in Road Models
stock market returns. Journal of Behavioral and Experimental
Taiwanese hotel stock performance: An event-study approach.
- Tashanova, D., Sekerbay, A., Chen, D., Luo, Y., Zhao, S., & Zhang, T. (2020). Investment opportunities and strategies in an era of coronavirus pandemic. *Available at SSRN* 3567445.
- Tondl, G. (2021). *Development in the Global South at risk: Economic and social effects of the COVID-19 pandemic in developing countries* (No. 65). ÖFSE Working Paper.
- Utomo, C. D., & Hanggraeni, D. (2021). The impact of COVID-19 pandemic on stock market performance in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(5), 777-784.
- World health Organization (WHO) 2020 *annual report*

- Yong, J. N. C., Ziaei, S. M., & Szulczyk, K. R. (2021). The impact of covid-19 pandemic on stock market return volatility: Evidence from Malaysia and Singapore. *Asian Economic and Financial Review*, 11(3), 191.
- Zhao, L., Rasoulinezhad, E., Sarker, T., & Taghizadeh-Hesary, F. (2022). Effects of COVID-19 on global financial markets: evidence from qualitative research for developed and developing economies. *The European Journal of Development Research*, 35(1), 148.
- Zoungrana, T. D., Toe, D. L. T., & Toé, M. (2023). Covid-19 outbreak and stocks return on the West African Economic and Monetary Union's stock market: An empirical analysis of the relationship through the event study approach. *International Journal of Finance & Economics*, 28(2), pp-1404-1422.